

NEW WORLDS SCIENCE FICTION

No. 105

VOLUME 35

2/6

ALAN BARGLAY

The Scapegoat

DONALD MALCOLM

The Other Face

BILL SPENCER

Button-Pusher

M. LUCAS

The Ark

**THEODORE
STURGEON**

Venus Plus X

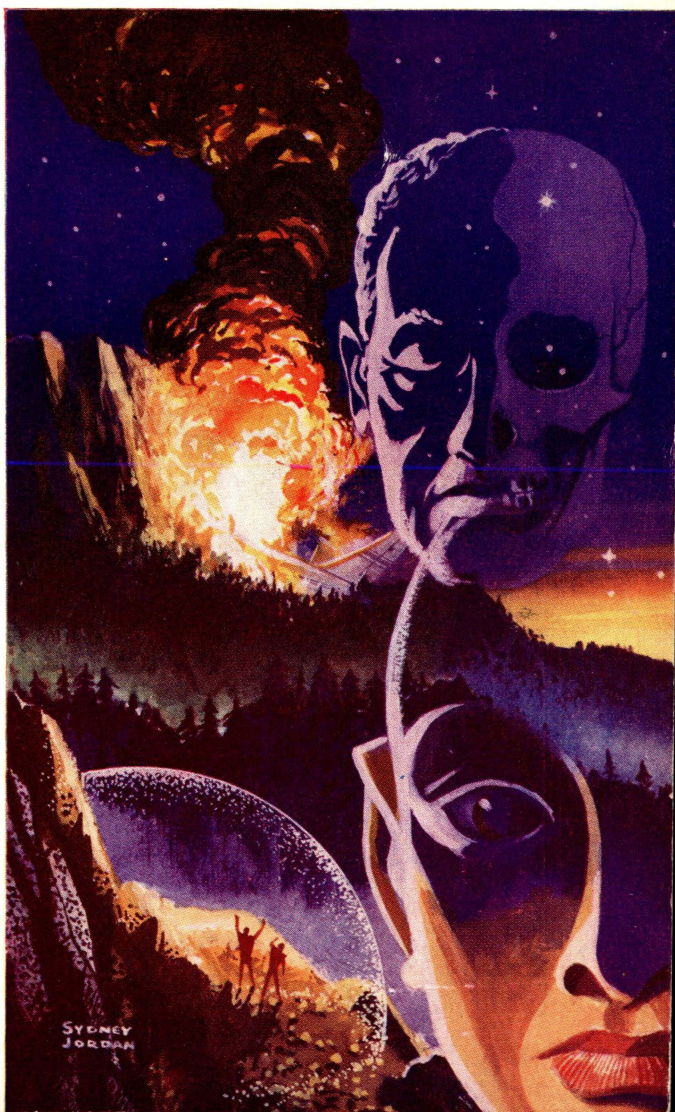
Conclusion



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NEW WORLDS

— PROFILES —

Sydney

Jordan

Surrey



Photo : Daily Express

Born in Dundee, Scotland, in 1928, he developed an early interest (obsession is perhaps the more accurate term) in the macabre and remembers being smuggled in to see "King Kong" on its original showing. Bone idle by nature he nevertheless managed to reach semi-literate standards (he states) by 1937. Had no idea who the Prime Minister was, but knew that Ned Mann built the space-gun for the film "Things To Come."

Boyhood heroes were Karloff and Lugosi and already his drawings reflected a morbid fascination for horrors. Spent two years at Miles Aircraft Technical School and left with a general understanding of aircraft design and construction which was to prove invaluable when he took up drawing seriously in 1952.

Came to work in London in that year and two years later the *Daily Express* commissioned "Jeff Hawke." The years spent (some would say wasted) in reading science fiction and drawing macabre scenarios paid off. It has been said that "Jeff Hawke" is the most adult science fiction strip ever to be presented by a daily paper and while Jordan modestly endorses this view he feels that much of the credit is due to his script writer and life-long friend Willie Paterson and to an almost complete freedom from editorial restriction. Says Jordan, "A science fiction strip isn't everyone's cup of tea, but the paper took a chance and gave it time to grow into something unique."

He has admired Sturgeon's work from the days of *Unknown Worlds* and fulfilled a small ambition when asked to illustrate *Venus Plus X*. Married to an imperturbable New Zealander and is father to a small female Terran, he lives in Surbiton.

NEW WORLDS SCIENCE FICTION

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Editor : JOHN CARNELL

Cover painting by JORDAN illustrating "Venus Plus X"

TWO SHILLINGS AND SIXPENCE

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So This . . .

There is no doubt that Kingsley Amis's non-fiction treatise on American science fiction—*New Maps Of Hell* (Gollancz) reviewed elsewhere in this issue by Leslie Flood—has given science fiction a first-class shot in the arm publicity-wise at a time when there hadn't been any news of the genre for some time. No book in our field—fictional or non-fictional—has had such a wide and diversified coverage of reviews, from the national press through the provincial to such highly specialised weeklies as *Punch*, *The Listener*, and *John 'O London's*, plus a veritable inundation on radio and TV with Mr. Amis himself in the saddle. Even the *Financial Times* devoted much space to it !

The fact that no two reviewers (or Mr. Amis himself) saw the book in the same light is neither here nor there. Intentionally or coincidentally, the necessary publicity has developed, and we are all the richer for it. In two short weeks the book has reaped more publicity than John Wyndham's famous *Triffids* has in ten years (incidentally now being filmed in Madrid—and wait until you see what they have done to *that* plot !)

New Maps Of Hell will take its place on the bookshelf, whether you agree with its diagnoses or not, elbowing over such erudite tomes as Reginald Bretnor's *Modern Science Fiction*, L. Sprague de Camp's *Science Fiction Handbook*, and James Blish's *A Sense Of Wonder*, to become a definitive work about modern post-war magazine science fiction, leaving far behind Professor J. O. Bailey's stumbling presentation of the pre-war book field in his *Pilgrims Through Time And Space* and making Patrick Moore's *Science And Fiction* look like a child's primer.

Mr. Amis diagnoses novels, short stories, authors, plot motives, sex in s-f (or the lack of it) often in a naively satirical fashion and produces a magnificent professional answer to the "Soul Searching" discussions which were running in this magazine some six months ago. It may well introduce new writers to the field and influence old ones—but to new and would-be British writers who may take Mr. Amis seriously, let me once again emphasise the fact that this was an examination of the *American scene*, a direct outcome of a series of lectures he gave at Princeton University in 1959. I have long emphasised the fact that British s-f broke away from the American mainstream immediately after the last war and the gulf is still widening.

... Is Hell ?

Without exception (apart from Wyndham, Clarke, Russell, and Christopher, who are published regularly in USA) there is no mention in the main text of post-war British s-f at all, although the additional Foreword which appears in the British edition does honorably mention both *New Worlds* and *Science Fantasy*, for which I am indeed most grateful to both Mr. Amis and the publisher. But I am never satisfied. Appearing on the BBC's Sunday night "Monitor" programme, Mr. Amis successfully eluded the eagle eye of the no-commercialism ruling by giving a heavy emphasis to two rival American magazines which appear regularly in this country (should I give them another free plug now?).

I understand from authors and publishers alike that a mention on radio or TV here is worth a thousand sold copies the next day. With my usual single-mindedness of purpose, I cannot think of a more deserving case for free publicity (apart from *New Maps Of Hell* itself) than this magazine which has pioneered along for fifteen years without very much official recognition (it really *is* surprising how those copyright acknowledgments elude us despite the vast amount of material republished from our pages). Certainly we recently hit the feature page of the *Sunday Times*, opposite a large portrait of Princess Elizabeth, in a down-beat article headed "What Happened To Science Fiction?"

Reasoning out the TV gaff it is fairly obvious that Mr. Amis didn't know the two magazines were published here or the BBC would have had their names deleted. Which leads to the surprising deduction that he doesn't know anything at all about the British field but that his reading has been confined to the American. Doubtless this coming Easter the delegates at the Gloucester Convention where he will be Guest of Honour will do their best to elucidate.

Apart from the extremely astute reasoning behind Mr. Amis's thinking, his phrasing and somewhat unorthodox writing style (understandable in the circumstances) and the number of American stories which are dissected, I welcome the book for an entirely different reason. Perhaps, after reading it, some of our paperback publishers will realise that there are other names in science fiction besides Bradbury, Asimov, Heinlein, and van Vogt. Not that it will do them very much good this late in the day, for they have already missed the boat—which is the subject for next month's Editorial.

John Carnell

Once in a very long while an author comes up with a story based on the logical human approach to an alien invasion from space. This is one such. Take the present worthy but exhibitionist endeavours of the United Nations to solve world problems—and give them the alien invasion problem !

THE SCAPEGOAT

by ALAN BARCLAY

o n e

Three years later, when histories of the space-war began to appear, writers called it a momentous meeting. At the time it seemed without significance. It began when Slesdyke came to a halt in the main corridor opposite a low archway cut in the natural Moon rock screened off by a plastic curtain. Some person, realising that curtains lacked one of the useful attributes of wood, had pegged a piece of metal to the rock wall and hand-painted on it the word 'Knock.'

Slesdyke knocked.

"Come in," a voice said.

He pulled the curtain aside, avoided getting wrapped up in its folds, and passed into the room.

The man seated behind the table was a small carroty-haired fox-terrier type, wearing only a shirt and trousers, the latter supported by old black leather braces. Slesdyke, standing at what he hoped was a correct position of attention, was a strikingly handsome young man (his enemies, of whom there

were many, called him beautiful), with a smooth pale-skinned face, black wavy hair and piercing blue eyes.

The two looked each other over.

They disliked each other at once.

"Well?" the small man demanded.

"Slesdyke," the other explained. "I'm ordered to report to General Turnock, Commander British Military Forces on the Moon."

"I," the small man announced, "am General Turnock. Judging by the shoulder tab your rank is captain. Right?"

"Yes, General."

"Then in future introduce yourself by your rank. What length of time have you served in the British armed forces, Captain?"

"Thirteen days, sir," Slesdyke told him.

The other nodded. "Thirteen days? That probably makes you world record-holder for speed of promotion. I took five years to get to Captain. Why were you sent here?"

"I was told you needed an A.D.C., sir."

"Who told you?"

"The Prime Minister."

"Did he, by gad. Friend of yours?"

"Yes, sir," Slesdyke's handsome face as he made this claim wore an expression of unruffled calm.

"Any qualifications for the job?"

"You asked for a man with a knowledge of languages. You also wanted tact and discretion. I was judged to fill that bill."

"But apparently your military experience is nil?"

"I've learned as much as possible in the thirteen days, sir."

General Turnock searched the other man's face narrowly, suspecting impudence. There was no sign of it.

"Well," he conceded, "there are ways of making good your lack of military knowledge. What practice have you had in the art of being discreet?"

"Six years in the Diplomatic service. Istanbul, Spain, Germany."

"Good experience indeed," the General admitted. "What languages do you speak?"

"German, Spanish, Russian and French."

"A talented young man indeed. There's something un-English about being good at languages. How good is your Russian?"

"I can tell dirty stories," Slesdyke offered.

"That I really believe," Turnock admitted with distaste. "Very well. As of now, you're my A.D.C. and here are my first instructions to you : One : Report to the Officer i/c ground troops and say I want you taught to salute, to stand to attention and to observe the correct military forms of address. Two : You will at all times wear the correct uniform of the British Army. I don't want to see you again in working overalls. Three : You will proceed to make good your lack of military knowledge by reading the classics." He waved a hand towards a shelf of books. "*Clauswitz: The Art of War; The Campaigns of Hannibal* by Liddell Hart ; *Cromwell* by Buchan ; *The Campaigns of Wellington, Napoleon, Nelson, Montgomery, Eisenhower ; The American Civil War*. Read them all. Four : You will set out to list and file all information available about every American, Russian, French, Spanish, Chinese and Scandinavian officer here on the Moon ; their ages, experience, careers, family histories, mistresses, vices, virtues. Five : Get the number, size, capacity and crew of every spaceship possessed by every nation and their performance characteristics Six : I'm prompting you to Major. This is to give you enough prestige to function efficiently as my A.D.C. It'll be in the D.R.O's within six hours. Put the rank badges up immediately after. Seventh and finally, if you send any private reports to your political pals in London, I'll find out for certain and get you a ten-year sentence to be served out here on the Moon. Right, Major Slesdyke, any questions ?"

"Yes, sir," Slesdyke answered, "why d'you think I'd send private reports to London ?"

"Think ?" Turnock snorted. "I know damn well you've been sent by the politicians to keep an eye on the old war-horse. And what's more, I know why you took on the job. You've come to get in a spell of space experience that'll look good on your records. A campaign medal too maybe. Then back to Whitehall to set yourself up as the man who's really been 'out there.' I read you as a hell-bent careerist. Mean to be Prime Minister some day. Right, eh, Slesdyke ?"

"Rather a snap judgment, sir ?" Slesdyke asked, contemptuously.

Johnny Blow-torch Hewson nudged his neighbour, who was a dark-skinned man called Blues Stamford.

"See what's crawled in ?" he whispered. "One of those Moon monsters we read about."

It was, as a matter of fact, Major Slesdyke, in the complete and correct uniform of an officer of a British Infantry regiment, an attire so unusual nowadays that it would have provoked stares even in London. Out here on the Moon it made people wonder whether they were having hallucinations.

Slesdyke took a tray from the rack, helped himself to some plates of food, and moved down the dining-hall. Low whistles from a group of girls greeted his passing. He sat down not far from Blow-torch.

"Hi !" said Blow-torch.

Slesdyke looked up.

"Yes ?" he asked.

"Why the fancy dress, Clarence ?"

Slesdyke considered him for a moment, then moved nearer, sliding his tray along the table.

"My name's Slesdyke," he said amiably, "Major Slesdyke, A.D.C. to General Turnock. This is British Army uniform and I'm wearing it because it's an order."

"It's pretty, Clarence." Blow-torch commented.

"That badge you're wearing says you've a commission in the British Military Space Service," Slesdyke retorted. "Lieutenant, I think ?"

"S-right," Blow-torch agreed. "By trade I'm a space-can chauffeur for Mars Southern Development Group, but I'm signed up for the duration of the present emergency."

"I see," Slesdyke conceded. "In that case you're heading for considerable trouble if you call me Clarence again, or treat me to any more adolescent impudence."

Blues Stamford had been observing Slesdyke carefully. He seemed unruffled, but on his handsome face was a sort of stillness. A dangerous stillness. Torch was less sensitive to danger.

"You a pilot ?" Torch asked.

"No," Slesdyke replied.

"Navigator ?"

"No."

"Engineer ?"

"No."

"This business of being the General's A.D.C.," Torch demanded, "what does it mean ?"

"In effect, chief secretary," Slesdyke explained.

Blues interrupted. He had a powerful impression that his friend was talking himself into big trouble.

"Lay off, Torch," he counselled, "it takes all sorts besides bad space-pilots like you to run a war."

Torch paid no heed. "Secretary," he exclaimed. "So you're a girl after all. Seeing that pretty face and pretty clothes it doesn't surprise me . . ."

The surprising thing, indeed the ominous thing, was Slesdyke's continued unruffled calm.

"Watch it, Torch," Blues warned. The warning came much too late. A movement of Slesdyke's arm sent his plate of steaming hot soup into Torch's lap.

"So sorry," Slesdyke smiled.

"You so-and-so, so-and-so and so-and-so." Torch gasped. "I'll beat hell out of you for this."

"You haven't the guts," Slesdyke told him.

"For Pete's sake Torch!" Blues pleaded. "This guy's the kind of bastard who never starts what he can't finish. You're giving him just the chance he wants to cripple you for life."

But Torch was beyond caution. He made a snatch at Slesdyke across the table.

"At least if we're going to be rough, let's be rough in private," Slesdyke proposed. "There's a gymnasium somewhere."

They went to the gymnasium. A crowd of about twenty men, mostly ex-civilian space-crew recently commissioned in the Space-Force, followed. It appeared at once that Slesdyke was a judo expert. It took him about five minutes to adjust to Moon gravity conditions, but after that he threw Torch around expertly and scientifically, taking care to break no bones.

Had Slesdyke been anyone else but Slesdyke, he might have got a round of applause from the by-standers, for after all he had been provoked into this fight. But no tokens of approval appeared. Slesdyke had every talent—good looks, quick wits, intelligence, everything except one, the gift for being accepted and liked by his fellow men.

"Bastard," a voice said in his ear as he walked away.

"An unpleasant incident, Slesdyke," General Turnock said. "I'm displeased with you."

"I was provoked," Slesdyke protested.

"Rubbish," the small man snorted. "With your six years' experience in the diplomatic service and your wits you could have avoided it."

"Did you have some orders, sir?" Slesdyke asked coldly.

"I did. I want you to come with me to this military conference next week. Before we go, get out a list of the officers attending, with a note of their experience and character. O.K.?"

"Yes, sir."

"Now this is important. During the conference I want you to spread the word that I'm a type of good old war horse, bred in the army, absorbed its regulations with my mother's milk, and likely to die of convulsions rather than approve an unorthodox manoeuvre."

Slesdyke's face expressed doubt.

"I'm not sure that I understand, sir," he protested.

"Then I'll spell it to you. During this conference every officer of every nation will be trying to size up everyone else. That's the real purpose of the exercise. You understand we've got to fight the problem of how Russians, Chinese and Americans can get along together before we're ready to begin fighting the aliens. So, as I say, whatever the official reason for the conference, its real purpose is to give us all a chance to weigh each other up. Understand?"

"Yes, of course. But why . . .?"

"Why advertise me as an old war-horse? Well, why not? That's what you think of me, isn't it? Well, isn't it?"

"I . . ." Slesdyke clung with difficulty to his usual composure. "That's what I thought till five minutes ago—but no warhorse would call himself a warhorse."

"Why not? I'm quite proud to be a warhorse. 'He paweth the ground with his hoof. He smelleth the battle afar off.' Nothing wrong with being a war-horse."

"I don't understand your purpose, sir," Slesdyke persisted.

"You don't have to," Turnock told him. "Just do what I say."

They made the journey by land-car, a long and exceedingly uncomfortable four-hundred-mile journey, involving the crossing of two mountain ranges.

They got their first sight of Fort Eisenhower as they looked down from the top of a mountain pass. The fort and its auxiliary installations sprawled over many square miles of the plain below. It bustled with activity. In the distance, a big Earth-Moon transport was being readied for take-off. Another seemed to have just recently set down. Over against the cliff

on the far side of the plain stood the biggest collection of ships Slesdyke had ever seen, and a motley non-uniform lot they were. Judging by the design, some were nearly a hundred years old. Some were tall, others short and squat.

"The Americans are acting as genial and generous hosts to a miscellaneous bunch of Spaniards, Brazilians and Argentinos," Slesdyke explained. "The ancient article over to the right is a freighter bought by Bolivia from France about fifty years ago."

"Been putting in some hours of study already, eh, Slesdyke?"

"Yes, sir. See all these crawlers moving to and fro between the ships and the shadow of the cliffs? I'm told the Americans have just tunnelled out a whole battery of new hangars and repair depots there."

"And that ship out on the plain?"

"Russian," Slesdyke said. "Their latest. Its name is *Agonek*—the Spark."

"Ah yes. We British must travel painfully by land-car but the Russians come by rocket. Very expensive for them. What's the meaning of C C C P on its flank?"

"Those are the Russian letters S S S R, sir."

"You don't say!" General Turnock exclaimed.

Slesdyke looked at him. "Didn't you know that, sir?"

"Your business is to answer questions, not ask them," Turnock snapped.

t w o

Inside the main air-lock of Fort Eisenhower they were received with gratifying ceremony. The guard presented arms. An officer welcomed them. They were carried swiftly by electric automobile down into the depths below the moon's surface and ushered eventually into a comfortably furnished anteroom.

The room was full of uniforms—Russian, American, French, Spanish, Scandinavian, Chinese. Each national group was attended by an American officer, immaculately dressed well-scrubbed, passing out drinks, and making amiable conversation.

"Good-morning, Major," a voice straight from the deepest of the American deep south spoke in Slesdyke's ear. "Glad to have you with us. Whisky?"

"Glad to be here," Slesdyke returned. "Did you say whisky?"

"Whisky was the word I spoke," the American admitted. "Don't get the notion we drink it every day. This conference is a ve-e-ry special occasion."

Slesdyke looked at the ounce or so of liquid in the glass. Its transportation cost out to the Moon must have been ten pounds. He sipped reverently.

"I guess you're aide to General Turnock, Major?"

"I am," Slesdyke admitted.

"He strikes me like he was a first-class fighting man. I'd be mighty glad if you'd give me a quick sketch of his official career, so I can let my General know the calibre of the man."

"Glad to," Slesdyke agreed. "He's from an old English Army family. Some ancestor fought at Waterloo I believe. A Sandhurst man. Won the M.C. in that Burma incident about twenty-five years ago. He's a tank specialist."

"What ship experience has he had?" The voice that asked this question was harsh, and had a strong foreign accent. Slesdyke turned to find a squat black-uniformed Russian at his elbow.

"Ships?" he asked, then hesitated.

"I guess the Major doesn't mean what you think," the pleasant American explained. "We haven't got enough water out here on the Moon to wrap round that sort. The Major means spaceships."

"Well," Slesdyke hesitated, "I don't think he's had any space experience, but none of us have any knowledge of space war, after all, have we?"

"What would you estimate were the qualities that made the British Government appoint him out here?" The American was still polite, but faintly persistent.

Until quite recently Slesdyke had moved in the inner diplomatic circles back down in London. He knew the answer to this one. The General Staff realised that the first phase of the space war would be a process of learning by experience. Someone had to make the first mistakes, and every eligible General (except Turnock apparently) was exceedingly anxious that they should be made by someone else.

"Not being a military strategist, that question's out of my territory," Slesdyke smiled, "but General Turnock is a most honest, loyal, hard-working, dis-interested man. In addition, I believe he's got a rather special talent for building up a good

understanding with other senior officers." As he said this, Slesdyke wondered if it could possibly be true. The Russian greeted this assurance with a loud snort.

"Gee!" the American said, "your General sounds to be quite a remarkable man."

Slesdyke thought the Russian snort rather easier to endure than the American's well-enacted enthusiasm.

After allowing time for these initial get-acquainted manoeuvres, the American C.O. General Masterman, summoned his guests into the conference room.

Slesdyke counted forty officers; eight American, ten Russian, two Chinese, three Indian, two British, three French, a Norwegian who represented the Scandinavian group, one Australian, two Canadian, an officer representing the South American republics, two from the Central African Federation, two of Oriental appearance wearing drab uniforms whose nationality he had no time to identify.

He sat beside General Turnock. Immediately opposite him was a grave, grey-haired French officer. Slesdyke greeted him in his excellent French. The man bowed distantly.

The American C.O. stood up at the head of the table.

"Gentlemen," he began, "may I begin by extending to you a warm welcome to Fort Eisenhower. Then as your host, I take it upon myself to suggest that our first item should be the election of a chairman for this meeting."

There was an immediate babble of sound as A.D.C.'s translated this into a multitude of languages. The noise had scarcely died down before a Russian officer was on his feet. He emitted a stream of Russian.

Slesdyke leaned towards General Turnock, but before he could begin to speak, the latter laid a hand on his arm.

"Let us economise in the use of our assets, my boy," he said. "I know how talented you are, but let's keep your knowledge of Russian to ourselves for the time being. Instead, listen to everything that is said with all your ears, and try to pick up any of the finer points the interpreters may miss."

The Russian's remarks were interpreted. No-one was surprised to learn that because the Russian contribution to the war effort was greatest, he proposed that a Russian should be chairman.

The Chinese agreed. A South American disagreed. An American officer launched into a description of the amount in money and materials being contributed by his country.

"Preliminary skirmishing," General Turnock muttered.

It took half an hour to elect a chairman. The officer chosen was the Spaniard, a tall dignified, grey-haired man, much respected and liked. Ten years previously he had commanded an exploration ship out to Jupiter, a feat which had gained him a world wide reputation.

He moved to the head of the long table and took the chair amid considerable applause.

An agreement was necessary concerning what was called the "official war language."

The Russians at once proposed their own language on the grounds that they were contributing the most in men and material. The Spanish Chairman proved himself to be well-fitted for his job. He pointed out that the criterion should be the greatest convenience of the greatest number of participants.

The Russian replied that to choose English for example, would set the Russians at a tactical disadvantage.

"You must endeavour to grasp the difficult idea, General," the chairman pointed out suavely, "that the British and Americans are not on this occasion your enemies."

The Russian declared himself to be insulted.

"They must go on record as having made the requisite number of protests," General Turnock explained.

The debate continued.

A French officer proposed his own language, the language which had in the past been the language of diplomacy and culture. He spoke of its lucidity, its inevitable logic, its clarity.

No-one paid much attention.

In the end, English was adopted with translations into Russian.

The remainder of the conference was devoted to a discussion on the appointment of a supreme commander, the idea being that recommendations from this conference would be considered by the contributing Powers, that is to say, the national governments which were contributing men and materials to the campaign.

The Russians stated their right to provide the supreme Commander because they were making the biggest contribution. The Americans questioned this claim, and entrapped the conference in a sort of morass in which roubles, dollars, fire-power and standard rates of pay were churned together, and from which it did not emerge for an hour. The senior French

officer proposed one of his colleagues (not present on the Moon) on the grounds that he was the ablest and most distinguished soldier alive at that date.

"Probably quite true," General Turnock observed under his breath.

Nobody else agreed.

No agreement was reached. Each C.O. proposed to report privately to his government. After some further confused discussion General Turnock had his say. Unlike the others, he got to his feet and made a formal speech. It was an excellent speech, judged by certain standards. Speaking in firm, crisp, forceful tones, and occasionally pounding the palm of one hand with a clenched fist, he said that all present were here for one purpose and for one purpose only, to defeat the enemy. Slesdyke reflected that there were in fact, a number of motivating purposes ; personal ambition, for example, as well as national aggrandisement and the hopes of making some kind of profit, perhaps in the form of technical know-how, as a result of contact with the enemy. He made a bet with himself that Turnock would use the expression 'all pull together.' He won the bet. A little later he won himself with 'shoulders to the wheel,' and still later—this was rather a long shot—'forgetting past differences.' Towards the end of the speech he was betting on 'keep our powder dry,' but lost out on that one, and got instead, with a slight trace of surprise 'We humans never will be slaves.'

Turnock sat down. There was no applause ; instead, a very curious stretch of complete silence.

The meeting broke up. Slesdyke drank cocktails, and observed his General talking earnestly and forcefully to each one of the senior officers in turn.

Slesdyke revolved like a planet in orbit on the fringes of these conversations. He heard again Turnock use such expressions as 'pulling together,' and 'putting shoulders to the wheel,' 'getting in a hefty smack at the enemy.' He saw bland, amused, tolerant agreement displayed by the Americans ; suspicion—but it seemed to be a rapidly diminishing suspicion—on the part of the Russians ; open contempt by the French officer. A young handsome brown-skinned Pakistani officer applauded every platitude enthusiastically.

For quite three weeks after this meeting, almost nothing at all appeared to happen. The military leaders of every nation

represented out on the Moon had reported back to their Governments debated, conferred and argued.

Then one day, it was announced at U.N. Headquarters that a Supreme Commander, United Space Forces, had been appointed. His name, the announcement went on was General George Fortescue Turnock, M.C., O.B.E., a Britisher.

Screams of rage and despair arose in various languages, and from many quarters of the globe, but not, naturally enough, from Great Britain.

"This surprises you, Slesdyke?" General Turnock asked.

"Not altogether, sir," he confessed.

"Tell me why you think I got the job, then?"

"Because neither side thinks you're dangerous."

"What d'you mean 'dangerous,' Slesdyke?" Turnock demanded.

"They think you're neither clever enough nor dishonest enough to play fast and loose with either side."

"Quite right, my boy. Any other reasons?"

"Yes; since we know nothing at all about this enemy, our first encounters with him will certainly be disastrous. You've been elected as a scape-goat. After some initial failures, during which of course we will build up a mass of knowledge about the enemy, you will be disgraced. Another general, either Russian or American, will lead our forces to victory and be acclaimed as the saviour of humanity."

"So young, so cynical," Turnock sighed, shaking his head.

"Tell me, then, to satisfy my curiosity, why do you stick with me?"

"I don't understand, sir."

"Come now. You're a young, brilliant, not-too-scrupulous career diplomat. You aim to be Prime Minister one day, right?"

"One has one's dreams, sir," Slesdyke admitted.

"Nicely put, my boy," the words were a sneer. "Now you've found you're serving under a man scheduled for failure and disgrace, why don't you quit? I'm sure you can ask the friend who got you sent out here to whisper again in the ear of the P.M. and have you brought back."

Slesdyke felt an urge to hurt the man. "Your failure need not be mine," he pointed out. "Besides, that speech you made . . ."

"You think I'm not as dumb as that, eh? But if not, what might my motives be?"

"A knighthood, perhaps," Slesdyke speculated, "A Governorship, maybe."

"Not for a failure. Your logic's slipping, my boy. Failures don't get knighthoods."

"Sir," Slesdyke exclaimed, "will you please stop calling me 'my boy'?"

"Ha!" Turnock gave a dry bark of laughter. "So I'm getting under that smooth lily-white skin, eh? Now get back to your kennel and start to set up a C.O.'s Conference. Fix it for three days from now. Any place. Fort Eisenhower; Fort Lunigrad. Here if they wish. Don't be difficult . . ."

"Purpose, sir?" Slesdyke asked.

"To discuss overall strategy."

t h r e e

"Welcome, gentlemen, to Fort Elizabeth," General Turnock said to the officers assembled round the conference table. Not all the officers who had met at Fort Eisenhower were present today. The Chinese, for example, had sent a brief apology. The Russian General was represented by his second-in-command.

"I think it might be wise to begin with a general discussion on war policy," Turnock continued. "Would anyone care to start the ball rolling?"

After a pause the American cleared his throat.

"This doesn't seem to me to need discussion, Mr. Chairman," he said. "Our directive from the United Nations is to defend our planet against the aliens, and to protect our space vessels as they pass between planets."

"This is, of course, an extremely general instruction," Turnock replied. "Have you had anything more precise from your governments?"

"My President has used the expression 'a robust fighting defence'," the American continued. "He means that any alien ship trying to penetrate inwards towards Earth shall be intercepted and turned back."

"You will go so far as to fire on them?" the French officer questioned.

The Russian officer spoke.

"My government believes that when the aliens discover that the most advanced group on our planet has risen to the high

level of civilisation represented by Soviet democracy, then even though some other groups may still be in the capitalistic slave-state condition, they will refrain from aggression against us."

"How do you propose they be made to acquire this knowledge of Soviet civilisation?" Turnock asked.

"We must destroy every ship of theirs that comes within a defined boundary," the Russian explained, stoutly.

"In fact," Turnock commented wryly, "Americans and Russians agree on this point. So, as a matter of fact, does my own government. Therefore unless anyone wishes to advocate an entirely different policy, we'll adopt this one, and formulate detailed plans accordingly. A fighting defence, as our American friend has so aptly put it."

The French officer coughed. Turnock looked at him sharply, but said nothing.

There followed an exceedingly tedious discussion of detail.

The fact was that no space navy in any real sense existed as yet. There was merely a very heterogeneous collection of ships, some armed with weapons of a very experimental sort, some un-armed. There was no order or uniformity in equipment, command, communications, or technique of manoeuvres.

Turnock proposed a fleet organisation based on units consisting of five-ship squadrons. In general, each ship's crew would be of the same nationality, but squadrons would of necessity be mixed. The total of ships available was about two hundred, from which twenty squadrons could be built up. It was agreed that squadrons should be designated either as light—small, manoeuvreable ships—or heavy. A group of four squadrons was to be called a Harka. (The name 'Wing' had been proposed by the British, and 'Group' by the Americans. Harka was a Russian word.)

After a great deal of discussion Turnock persuaded his allies to agree that the operational crews—these would amount to about a thousand officers and an as yet un-estimated number of men—should be accommodated together, whatever their nationality—'to gain an understanding of each other's qualities,' as Turnock explained. The Russians opposed this furiously, until Turnock hinted that crew-officer quarters might be set up at Lunigrad. After this hint, the Americans opposed the scheme with equal bitterness. The proposal was put to a vote, Russian and British voting together with one or two other nationals. The Americans were defeated. One American

officer signalled this defeat by describing the British as treacherous bastards.

"Thank you, gentlemen," Turnock said. "I think we've made satisfactory progress this afternoon. To avoid any misunderstanding, will you all please note that although we reached our decisions this afternoon by vote, I will as supreme commander, make strategy decisions personally, although of course I shall always be very happy to have your opinion and advice. You will receive orders from me in due course via my A.D.C. here, Major Slesdyke." He got up and walked out briskly.

"Well, Slesdyke?" Turnock asked later.

Slesdyke had been drinking with other officers since the conference concluded. He could absorb enormous quantities without being much affected, but he looked pale and his speech was slightly blurred.

"The Americans are saying now that you may be O.K. on logistics. They mean administration."

"What did they say before today?"

"That you'd been a mighty fine combat officer."

Slesdyke, like all good linguists, had an ear for intonations, and imitated the American accent perfectly.

"Any idea what these phrases mean exactly?"

"To say you're a good combat officer means you haven't got the brains for strategy. To say you're good on logistics means you haven't got the guts to be a combat officer."

"Thank you for these frank opinions, Slesdyke. Give me some more. Tell me what you think we chiefly lack for the prosecution of this war?"

"Information," Slesdyke said promptly. "See the *Campaigns of Marlborough*; his success was founded on an excellent intelligence service. Take the Scottish Jacobite rebellion of 1745; the Scots had no intelligence service at all. They passed within ten miles of a body of their opponents. Could have destroyed them. Might thus have gained enough impetus to drive south to London. We need more information."

"I see you've been doing your home-work," Turnock approved. "Tell me what we know about the aliens."

"A moment, sir." Slesdyke left the room and returned with a couple of folders. "First appearance of aliens: strange ship ranged alongside Earth-Mars freighter three years ago. Moved

off without doing harm. Six months later, another Mars freighter found floating in space not far off its route. Drive tubes destroyed by explosion ; crew killed. Ship gutted of stores and equipment. Third case : ship landed, outside Krushevgorod in Siberia. Man-like aliens drove through the town in small vehicles, set it on fire, plundered it, killed many inhabitants. There are a large number of accounts of this sort, sir. Eighteen months ago, alien ships discovered landing and taking off on Callisto. Closer inspection showed a domed city under construction there. A year ago the ship *Good Hope*, Captain Sir Wilfrid Scheelle, under orders from the United Nations, attempted to make peaceful contact with the aliens on Callisto. Was allowed to touch down there, was fired on immediately, and presumed destroyed. Shall I go on, sir ?”

“ No,” Turnock told him. “ That stuff has no military value Have you anything about their weapons ?”

“ If you like, sir. One report states that an alien ship launched an incandescent ball of white flame at ours. An account of their most recent land raids on Mars says they drove through the town in gleaming metal boats, which floated above the ground, and that their weapons gave off streams of crackling lightning.”

“ The Assyrian came down like a wolf on the fold ; his cohorts were gleaming in purple and gold . . .” Turnock quoted.

“ No doubt there’s a nucleus of truth in all these stories ; after all we humans have weapons that crackle, and vehicles that float clear of the ground, but none of that stuff is accurate enough to be useful. Bear in mind, Slesdyke, that this is real life, not a boy’s story. The aliens must live and act within the bounds of their physical limitations.”

“ I beg your pardon, sir ?”

“ I mean this ; they need food, oxygen and water, or some alternatives to these. Their weapons must have limits of range, a finite rate and weight. These weapons must be transported through space, so their quantity is limited. Occasionally they will break down. Missile fire is basically the manipulation of energy, and stores of this energy, whether of chemical explosives or other sources such as dynamos, have weight and bulk, and must be limited in amount also.”

“ I understand this,” Slesdyke nodded. For the first time he felt himself to be impressed by Turnock’s grasp of essentials.

"These are the things we must find out. After the squadrons are formed and have practiced manoeuvres, we'll send them out on fighting patrols. You'll emphasise that we want information. Type of weapon ; killing range ; rate of fire ; exhaustion point. That's to say, after how many shots must it withdraw to replenish its ammunition supplies or to re-charge its batteries. And of course we want to know the size of their ships. There's only one way of getting this information. By sending out fighting patrols."

The squadrons were formed ; Russian, American-British, French, Scandinavian, Chinese, Argentinian, Scots, Pakistani, Irish, Canadian, Australian.

Out in space the crews in their ships practiced manoeuvres. There is neither north nor south nor east nor west in space and an extra dimension to move in, so new forms of order emerged which seamen of old had never heard : "Change Direction, line astern, Aldebaran."; "Direction Vega, Line abreast, Acceleration point five for three seconds." "Coast in battle formation."

There were collisions. Some men died. There were Courts of Enquiry, bitter argument, recriminations. There were misunderstandings, muddles, confusion. There were questions, libels, slanders, oaths, unprintable abuse shouted over the radio in a dozen languages.

But they learnt to handle their ships. They built a space language by which orders could be issued and understood. They forgot, for part of the time, that they were Russian, Scots, Chinese or African or American.

When they were not in space, the crews relaxed.

In all ages, and in every nation, the military man has tended to be uninhibited in his ways of relaxing after dangerous and exacting duty. At Lunigrad the Officers' Mess was rather exceptional in this respect. In addition the low gravity made possible a number of ingenious schemes which could hardly have been dreamed of by their great-grandfathers during World War Two.

General Turnock's intention was that crews of every nation should get to know and understand each other. Judging by the amount of spilt blood, broken noses, smashed furniture, slipped discs, even a broken leg or two and one case of concussion, it did not seem likely to be realised. At one time the French officers were obliged to go around corridors and mess-

rooms in threes for self-protection, at another ten American officers were besieged in their rooms for four days by an international group comprising Swedes, Dutch, Irish and Canadians.

A particularly vicious fight occurred when the Scottish officers decided to celebrate Independence Day. (Scotland had liberated herself from England about twenty years previously) While members of other nations looked on in bewilderment, the Scots launched an unprovoked attack against the English. There were four Scotsmen plus, it must be admitted, some recordings of bagpipe music, against twenty Englishmen. The Irish joined the Scots out of sympathy, and so did the French, for the sake of the Auld Alliance. The Pakistanis are, of course, also a warlike race, and are peculiar in this additional respect, that they enjoy bagpipe music. They sided with the Scots too.

It was a notable occasion. The Scots claimed that the perturbations set up by this battle shifted the Moon about two miles out of its former orbit. Flodden, Killiecrankie, Culloden and a number of other ancient defeats, were avenged.

Before the disagreements between nationalities had gone so far as the actual wrecking of the Lunigrad base, General Turnock gave an instruction that probing attacks should be carried out towards the alien bases on Jupiter's Moons.

This order had a deflationary effect on the high spirits of the space-crew officers. It also produced instant and vigorous protests from the C.O's of certain national forces on the Moon.

"My C.O. would like you to assure the General that he'll carry out this order loyally," the American Adjutant assured Slesdyke, "but he'd like the General to know, unofficially, that the United States Government is likely to think it goes far beyond the U.N. instructions, which were, if you remember, to carry on a fighting defence of our planet."

"I'll tell the General this," Slesdyke promised. He did so. He also passed on similar unofficial comments from the Russian, Chinese and Indian C.O's.

"What d'you think they'll do behind my back, Slesdyke?" Turnock asked.

"They'll send reports back down to their governments of course, but the governments won't grouse at U.N.—not yet. This is just your first operational order. They'll let you make a number of blunders before turning the heat on you."

"You're a great comfort to me, my boy," Turnock commented. "I take it you believe this order's a blunder?"

"Seems that way to a lot of people," Slesdyke retorted. "Consider what will happen: the squadrons go out to Jupiter and get clobbered. We send out more. They're clobbered. What does it get us? Why not keep the squadrons on patrol at about Moon distance from Earth and clobber any raider that comes this way instead?"

"I told you the reason," Turnock said. "By carrying out the attacks I've ordered, we get information about enemy tactics, weapons and firepower, and we discover the effectiveness of our own manoeuvres and weapons. Tell this to the boys in the Mess. Tell them this as well: a defensive screen out at Moon radius means a screen over a sphere of twenty times ten to the tenth power square miles surface area. With our mere two hundred ships, that makes one ship per ten thousand million square miles. A wide-meshed screen, eh? And it doesn't take care of our colonies on Mars either."

"But with radar detection . . ." Slesdyke objected.

"For an intelligent man, you think like a fool at times," Turnock snapped. "What good will it do to know where they are if we can't get to them?"

"The argument's inescapable," Slesdyke admitted, "but it merely serves to make our situation seem more completely hopeless."

"Whose situation?"

"Our own military situation."

"Why?"

"Well, our job is to teach the aliens it's too dangerous to come sunwards towards our planets. We hope that after they've learned our strength, they'll leave us alone, or negotiate. But you've just handed me a proof that we can't do it—that with ten times the ships we've got we couldn't beat them off or turn them back."

"So you think we're beaten before we start?"

"It looks like it."

"Then why don't you go home? Get a transfer back to London. Get into politics so you'll be in a position eventually to lead the delegation that comes out from Earth to negotiate surrender terms with the aliens. You might even get a job with the aliens, as a sort of quisling Governor."

Slesdyke, whose face was usually pale, turned paler still. Turnock watched him under bushy brows.

"You hate my guts, don't you?" he asked.

"Yes, sir," Slesdyke replied instantly.

"Then why don't you quit?"

Slesdyke made an effort and recovered his composure.

"I don't know, sir. Usually I understand my own motivation pretty well, but not this time. Several times already I've gone the length of drafting a letter to a friend of mine to get me shifted, but always I've torn it up."

"Interesting psychological problem," Turnock commented. "Perhaps you want to stick around till I'm removed from command and sent home in disgrace. You'll enjoy that moment, won't you?"

"Yes, sir," Slesdyke told him.

"Well, pending my removal, get on with the job of organising these patrols."

four

The patrols went out. They went out towards Jupiter. The ships were powered with the semi-faster-than-light drive which took them out that far in four or five days. They were armed with recoil-less artillery and homing torpedoes. A small percentage of the torpedoes carried atomic warheads, but the majority had chemical explosives only, for the atomic stuff was expensive to produce, and still more costly to freight out to the Moon. After a while no more atomic war-heads were supplied.

When the patrols reached Jupiter and began to match speed with one or other of its moons, the enemy ships leapt to oppose them.

The homing torpedoes were destroyed many miles from their target by anti-missile fire, and the ships themselves could seldom come within fighting range of their recoil-less guns. The homing torpedoes did not make the aliens hesitate. While destroying them—almost with the offhand ease of swatting flies, the flashes of the harmlessly exploding missiles twinkling in the dark sky—the aliens accelerated confidently towards the human ships.

On nearly every patrol some of our ships were destroyed. The others invariably turned and ran. The humans excelled the aliens only at running away. The semi-faster-than-light system seemed to be handier than whatever principle the aliens used. Those ships which escaped returned towards the Earth

and the Moon and landed again at their base, and the crews, exhausted and discouraged, were transported in due course to the mess at Lunigrad.

Slesdyke spent a lot of his time at Lunigrad now. He had an enormous capacity for work. He could argue, explain and question in any and every language for hours without halt. He performed miracles of three-cornered interpretation, slipping from mellifluous Spanish to guttural German, and thence to Russian and back to English. To lubricate these conversations he had recourse to an extensive repertoire of polished but utterly hair-raising dirty stories. He told them in English with paralysing impact, but judging by the deep guffaws and shouts of slavie approval, it was suspected that he put them across even more powerfully in Russian. Perhaps Russian is a better medium for this particular art.

Though they laughed at his jokes, and drank his drinks when they got the chance, nobody liked him. They called General Turnock and Slesdyke the Lion and the Unicorn. Turnock was easy to see as the British lion, but it had to be explained to some that the Unicorn was a beautiful fabulous beast, too wonderful to be true, who was capable of being tamed by any virtuous maiden. Slesdyke, despite his looks, had small success with women.

"You don't manage to get yourself liked," Turnock said to him.

"No, sir," he admitted. "I'm not accustomed to being liked."

"Do you care?"

"I don't think so. If I live long enough I'll be respected, which seems to me to be preferable to being merely popular."

"I agree with you there," General Turnock said unexpectedly. "What did you want to see me about?"

"I wondered if you had read the patrols' reports?"

"Of course. What d'you suppose I do with my time?"

"But have you noticed how it's working out—or rather, how it's not working out? Take the case of a mixed Russian-British squadron; three times out of four one of the Russian ships finds itself a major mechanical defect just before blast-off, and the patrol goes off one ship short. On other occasions a Russian ship turns back on account of engine-room defects. When they get in the operational area they frequently drop out of formation. Communication difficulties is the usual excuse."

"What about the Americans?"

"They're playing the same game."

"You've got some Russian-American squadrons. What happens with them?"

"They go out. They come back. They send in reports. How can I tell what really happens? They seldom have engine-room defects or communications failures. The significant thing, however, is the high percentage of 'Failed to contact the enemy' reports from them."

"Who else is playing this curious game?"

"The South-Americans. The Chinese. Not the French, nor the Spaniards, nor the Scandinavians. The fightingest squadron is Thirteen. It's made up of an old refitted American tub manned by Ghurkas, two Scots ships, a Norwegian one and a Pakistani. That lot would fight anything. I rather think they'd fight the Americans or the Russians if you asked."

"Why do you think the Russians and Americans hold back, I suppose they've got guts, same as us?"

"It's orders from top. Neither the U.S. nor U.S.S.R. wants to expend itself against the aliens."

"I think you're right. But there are factors in the situation that the politicians back down on Earth can't have reckoned with. These Russian and American boys are living, eating, sleeping and playing together with the British and Scandinavians. Pass the word round the British commanders; say there must be no ragging, no reproaches, no recriminations. On the contrary, let our men be just too frightfully decent about it. Put this idea across properly, and the boys will get a lot of fun out of being decent. In a couple of weeks something will happen."

Turnock understood human nature. The British space-crews found that being decent could be developed into an enjoyable and satisfying game. Whenever an American ship was declared unready for patrol, they were elaborately sympathetic and understanding, and a British or Scandinavian ship volunteered in its place. If mechanical trouble developed in U.S. or Russian ships on patrol, the British captains were solicitous. Of course, unfortunate remarks were sometimes made, quite unintentionally. A Pakistani captain left his inter-ship radio on, entirely by mistake, of course, and was thus heard to say that as the squadron was getting within detection

range of the enemy, the Russian ship could be expected to develop engine trouble very shortly.

Once, a century ago, a Frenchman had declared that the British were ready to defend Britain to the last Frenchman. Now Frenchmen reversed this insult by saying publicly that the Russians and Americans seemed ready to defend their home planet to the last Britisher.

Tensions built up in the space-crew messes to an extent that made some sort of crisis inevitable. Nobody, however, except possibly General Turnock who kept his thoughts to himself, guessed what form the crisis would take.

Slesdyke had an office at Lunigrad, with a small staff of secretaries, clerks and record-keepers. The crisis began with a visit paid to him by a young American officer, a ship's pilot.

The young man saluted.

"Well, Lieutenant?" Slesdyke asked.

"I wish to request a personal favour, Major," the young fellow began. "I'd be obliged if you would assist me to apply for British citizenship, and thereafter accept me for service in the British Space Force. I've got the facts about myself and my space experience set out on this paper." He put a folded piece of paper on Slesdyke's desk, and stood at ease, face expressionless.

Slesdyke took the piece of paper and looked at it absently. Of all the things that might have happened, this was something he had never dreamed of. He wondered if Turnock was really astute enough to have foreseen something like this.

"You understand this may get quite a bit of publicity, Lieutenant?"

"A bit of publicity is something I'd like it to get," the American stated.

"Do any of your friends feel the same way?"

"I haven't said a thing about how I feel, Major," was the answer.

"My mistake," Slesdyke confessed. "Would you like to say why you're seeking British nationality? Someone will want to know."

"Let's say I don't care to see the U.S. staying nootral in this war."

He saluted and went out.

That day Slesdyke got identical requests from three other American officers. He sent all four to Turnock. Turnock read

them, chuckled to himself, then sent copies to the American C.O. 'for comment.'

The American C.O. made no comment. In fact, the occurrence was not discussed at all. Nevertheless, subsequent patrol requests indicated that American ships were suffering hardly any mechanical break-downs. The number of their contacts with the enemy increased. So did their casualties. A patrol consisting of three American ships and two Brazilian fought a particularly savage engagement with an alien, losing two ships, but severely damaging the enemy.

"Well," said the blonde officer with the Cambridge accent, "we're a democracy in Britain, of course . . ."

"Pardon," his Russian listener interrupted. This Russian was a slant-eyed type from outer Mongolia. "We in Russia are a democracy. Yours is a capitalist system."

The Cambridge man tut-tutted, and said rather as a Cambridge man would: "Let us agree that yours is a Russian-type democracy, and ours is a British-type democracy. May I continue?"

"Very well," the Russian agreed, cautiously.

"My point is, that in a democracy, the law is made for the service of man."

"Laws are made for the good of the state," the Russian objected.

"What's the state? Just a fabulous beast. The way I see it, regulations are made for the good of you and me and our pals. What's more, they're made by crummy types in striped trousers back down on Earth who don't know how things go up here."

"So?" the Russian asked. He had turned pale, as if he had been listening to a piece of blasphemy.

"Some of these people," the Cambridge fellow went on, with a nod of his head, meaning people who were not Cambridge men, "think you Russkis just plain haven't got the guts to fight. This isn't the way I see it at all. You just don't have the right attitude to official orders."

"What would you advise?" his listener asked hoarsely.

"My dear old soul, I wouldn't presume to advise. I just tell you what I would do if I were you. For instance, when you get an order saying you must hold back and let the Britishers do the fighting, you must salute, click your heels—I suppose you Russkis click your heels?—and say: 'Ja wohl, mein Colonel,'

or whatever is the word in Russian, then just forget the whole thing. Put it clean out of your mind."

"But afterwards—the explanation?"

"Perfectly simple—you say you attempted to hang back as ordered, but owing to the superior performance of the Soviet ships, you found yourself in the lead, confronting the alien ship. Alternatively, say that the British ships manned by cowardly capitalist-slave types, turned tail and left you . . ."

"You would not object to this?"

"My dear old soul," the Cambridge man assured him, "if you fight with us to our faces, you may say what the hell you like about us behind our backs."

"Yes," the Russian agreed hurriedly. "I must think of this." There was a gleam in his eye. He had just been the recipient of an idea too large and resplendent to keep to himself. He looked around in search of a compatriot to share it with.

"Excuse me," he begged, getting to his feet.

"Certainly, certainly," the Cambridge man agreed. "If we should ever get back to Earth again, come and spend a weekend at my father's place, old boy. Spot of first-class dry-fly fishing just at the bottom of the kitchen garden".

Shortly after, a changed trend was noticed in Russian squadron reports. Slesdyke reported this change to Turnock, who did not seem to be surprised.

"Place any random assortment of young males together in a close group, and give them a dangerous and rather special job to do, and inevitably they become comrades in arms, competing with each other, supporting each other, fighting for each other, risking their lives for each other. Orders from top brass can't stop it."

Turnock sat at the top of a long table, crouched forward, scowling. He was scowling at the officers grouped round him. They were the senior armament officers and gunnery officers from each national unit.

"I want your personal opinions. Not official views, pep talks, or propaganda hand-outs. Just the truth. Nothing will be recorded. You can speak freely. Well?"

Nobody spoke. They looked at each other, like schoolboys.

"Well?" Turnock barked. "You must have opinions, surely. You, sir, speak up."

"Very well, General." This was an American officer. "None of our weapons are sufficiently destructive," he said. "The homing torpedoes do superficial damage when they hit, but the enemy has a very effective anti-torpedo torpedo, with high speed and manoeuvrability, so that only a small percentage of ours reach their target, and when they do, as I say, the damage is often only superficial."

"Anyone agree?" Turnock asked.

A number of people nodded.

"We need something with much higher speed, and an armoured nose capable of piercing the hull. A detonation in high vacuum against a ship's hull tends merely to shove the damn thing slightly off-course."

"What about the recoil-less guns?" Turnock asked.

"Useless," someone said.

"As much good as pea-shooter," another added.

"Why?" Turnock demanded.

"Well, sir," a Russian officer said hesitatingly, "during gunnery training we're told that out in space a projectile from a recoil-less gun will hit at any range, so long as that thing will stay still or pursue a regular course. In actual fact, the probabilities of hitting the enemy aren't worth a damn at ranges over five miles."

"Exactly. We've gotta coast right up to the enemy before it becomes worthwhile to open fire. All that time he's loosing off torpedoes at us. We've lost a lot of ships that way."

General Turnock looked down at his notes. "According to the records, most of the damage we've inflicted has been done with those same recoil-less guns."

"Meaning that on one or two occasions we've been lucky, General," the American officer protested. "If by good luck three ships or maybe four get in close, they can pour quite a hail of shot into the enemy. The seventy-five calibre A.P. stuff goes through their hulls. Once inside it gets deflected off equipment and struts and beams. You can imagine the sort of mince-meat it makes of the innards. But to do this we've gotta have the luck."

"But provided we can get our ships close enough, we can pound them to pieces, eh?" Turnock insisted.

"I wouldn't put it quite as optimistically as that, General," the armament officer objected. "I'd say that if three or four of our ships get close to an alien while still in shooting con-

dition, which happens rarely, there's a fifty-fifty chance they'll pound him seriously, and a rather smaller chance that two out of the three ships will get back to base to tell the tale. That's all."

"Very well," General Turnock conceded. "I understand. To sum up. The homing torpedoes on which we placed our hopes, get shot to piece as they coast towards their target. They're virtually useless. Our sole means of hitting the enemy is to get in close and sting him to death. What can you suggest to improve this situation, gentlemen?"

"Let's have atomic war-heads to the torpedoes," someone proposed. "That way every strike will write off one alien ship."

"It's a fantastically difficult, expensive, complex way to fight the war," another man objected. "Can someone say how much it will cost to get a nuclear war-head made, fetched out to the Moon, loaded in a ship, and fired against the enemy? Think of all the problems of radiation screening. And when it's fired its chances of hitting work out at one in fifty or thereabouts."

"We want a fresh deal," a French officer said. "In effect, we're using weapons that were never intended for space warfare. We need new, powerful long-range, hard-hitting devices."

"Meanwhile, while the boffins are designing these new weapons," Turnock remarked, "the enemy is building up its forces, gaining confidence, accumulating information about our planets. If the enemy decided to make a landing in force on Earth tomorrow, d'you think we could hold him off or prevent him consolidating his foothold? I certainly don't."

They looked at each other doubtfully.

"General Turnock," one man asked unexpectedly, "what do you imagine the aliens' intentions are?"

"They're Vikings of space," the General said.

They looked surprised to hear him use this picturesque phrase.

"Somewhere within a few light years of us there's a teeming vigorous young race. I imagine it's about the same level as ourselves on the evolutionary ladder; maybe a few hundred years ahead of us technologically. I deduce it's solved a lot of technical problems recently, including the interstellar drive, and it's full of self-confidence, full of buck and spit, drive and push. It's bursting into space clear away out of its own solar system.

These scoundrels we're fighting are its scalliwag adventurers. Outlaws. Explorers. Discoverers. The Drakes, Raleighs and Frobishers of their part of the galaxy. They're looking for loot ; plunder ; land to occupy ; defenceless weak natives to exploit. To them we are just as the innocent naked Caribs were to the Spaniards."

"You don't offer us much hope, General," the American officer protested.

"Have a good look at me," Turnock retorted. "Do I bear any resemblance at all to an innocent naked Carib?"

"We ain't never seen you naked, General," the American said, "but I guess you wouldn't seem all that innocent even in your birthday suit."

five

"Slesdyke," Turnock asked, "you've told me once or twice I'm booked for the part of scapegoat when the nations get worried about our initial blunders, failures and non-successes. Can you estimate what time I've got left?"

"About a month," Slesdyke told him readily. "Maybe six weeks. The U.S. Government representative at U.N. is saying your probing attacks are costing men and ships. They're saying you haven't attempted this defensive screen. Since you took over, five attacks have been made on Earth and two on Mars and you haven't had a ship within a million miles. Besides, the Russian General thinks he's learned something about the alien weapons and tactics, and his boffins back in Russia have about finished developing a highspeed homing torpedo that follows a random course to its target. So the Russian General reckons he's about ready to handle the war from now on."

"Six weeks?" Turnock asked. "Very well, let's face it." He pulled open a drawer and produced some sheets of paper and handed them to Slesdyke. "I want you to study this stuff and get it translated into Russian and French and Spanish. This is the factual material of a speech I'm going to make in three days' time, and I'll want you to translate as I go along."

Slesdyke began to read the notes. After glancing over the first page, he pulled out a chair and sat down, paying no attention to Turnock. He read on, completely engrossed.

When he had finished he laid the papers down.

"From the moment I became your Aide, General, I've had an increasing conviction that you've been steadily working towards a known objective. I'm convinced now that this is it." He pointed to the papers.

"So now you know my objective," the General jeered.

"Of course not. These are merely notes about fire-power, turning circles, acceleration rates, fuel and load-carrying characteristics. Nevertheless, this speech you're giving is to prepare the crews for your master-plan. I'd like you to tell me what it is."

"Would you, bedamned," Turnock growled. "Tell me why the hell I should?"

"Certainly," Slesdyke replied calmly. "This is the crisis and climax towards which you've been working. I'm convinced of that. Now if you're planning to commit our space forces to some foolish military adventure, just for your own amusement, or because you hope to get military fame out of it, I intend to have you stopped. Oh, don't waste time trying to frighten me," he raised his hand in protest. "Putting me under arrest won't dispose of me. The moment I go out of circulation, a number of people will start asking questions. On the other hand, sir, I must admit that having worked with you this long, I find it harder every day to believe you're the sort to indulge in irresponsible adventure."

"This is the point," General Turnock exclaimed, "at which I ought to shout: 'You insolent young puppy, you ought to be horse-whipped,' or have you put under arrest, or say: 'Sir, you are a soldier. Your duty is to obey your senior officer.' But I shan't . . ."

"Because none of that would be effective," Slesdyke interrupted.

"I don't suppose any General has ever been talked to like that before." Turnock growled. "Very well, I'll tell you . . . I've never believed in this defensive scheme. You know that already. It's . . . oh, it's a footling politician sort of plan. If one is obliged to resort to war, one should do it with all one's power. Besides, I've never been so scared of these alien monsters from space as the politicians seem to be. I've always believed they must be fallible finite beings with faults, failings and limitations. Lately, evidence has led me to the conviction that they're a mere band of roving gangsters, the scum and froth of some alien civilisation. Why should an entire planet

yield to them? Now you've warned me that I shall be replaced before long. If I am replaced it will be by some cautious, non-aggressive defense-mentality Russian, so I must act soon. This plan, therefore," he waved a plan to the papers, "is a plan to provoke a full-scale battle with the aliens. We're going to tempt them out into space and destroy them. I don't mean just some of them, but all—every one. And their base out there as well. You've sat in on the Armament Conference, so that you must know that if we can get close enough for artillery fire we can pound them to pieces. Very well, we'll do that. We'll take our whole fleet. We'll get in close, drive at them and pound them. These papers give my detailed battle plans." He tossed a second wad of papers across to Slesdyke. Slesdyke picked them up and began to read. As he read, he turned pale. But it was the pallor of excitement. He was a sensitive, intuitive, emotional type, was Slesdyke. He could recognise a great historical moment while it was still in the making.

"I'm glad you showed me this, sir," he said.

"You're with me then?"

"One hundred per cent."

"You realise if we lose—your career . . .?"

"Nobody made a career by continuously playing safe," Slesdyke protested. "Besides, we won't lose. We can't. However, you must let me re-shape this speech. Let's skip the dull sordid details of fuel reserves and armament. Let's tell 'em simply, straight from the heart, that we're going out to Jupiter to destroy the enemy. Let's say that the British will go in any event, and we shall be glad if friends will come along. This should be done without frills, in a plain, soldier-like manner. You'll let me do this?" he pleaded.

"Why certainly," Turnock grinned. "With Slesdyke on my side, how can I possibly lose?"

The senior Officers, Wing and Squadron Commanders, Ships' Captains and gunnery specialists assembled in the central cavern of Fort Eisenhower, the only hall large enough to hold them all.

"Gentlemen," Turnock began abruptly, "since I've called you all together it must be evident that I have something important to say. On this occasion I'm going to reverse the usual order of things, and have my A.D.C. speak on my behalf in Russian first, then in English."

They had agreed on this device so that the Russians should get the full impact of Slesdyke's eloquence instead of hearing an uninspired translation.

Slesdyke stepped forward. Slesdyke was a natural actor. He had a sense of drama and a feeling for the rhythms of speech. He began to speak quietly, in level tones. After a moment the Russian part of his audience stirred. There was a rustle, a murmuring of sound among them. Seeing that he had gained their close attention his voice rang out loud. It resounded like a clear trumpet in the cavern. Though the listeners of other nations could not understand, the mounting excitement communicated itself to them all. Slesdyke finished with one short sentence, spoken quietly. There was prolonged shouted applause, cheering, stamping of feet. Slesdyke spoke again, in English. He spoke in words as effective as any battle-speech from Shakespeare. In French it was almost as if he were chanting a new version of the Marseillaise, and his Spanish sounded like a war poem.

Only a few attentive listeners who were also good linguists realised that he did not say precisely identical things in all these languages.

When he had finished, pale and perspiring slightly, the cheering stamping and shouting from his audience lasted nearly ten minutes.

"That was a magnificent performance, my boy," Turnock approved. "D'you realise that posterity will attribute these golden words and phrases to me?"

Then Turnock got to his feet and announced curtly, "Wing Commanders and Squadron Commanders will meet me in ten minutes please for detail planning of the operation."

"What d'you imagine you're doing, Slesdyke?" Turnock demanded.

"Doing about what?" Slesdyke asked.

"Doing with that bundle of space-kit, boy?"

"I'm participating in the forthcoming jamboree as second reserve communication officer and tea-brewer-upper on *Firefly*, sir."

"You're doing nothing of the sort, boy," Turnock retorted. "You are valuable non-expendable Staff personnel; your place is back here at base with the secretaries and the other girls, so put that stuff back where you got it and crawl into your kennel."

"Sir," Slesdyke replied with rather more than his customary politeness. "You can go to hell." He saluted elaborately and went out.

A moment later he returned.

He observed that the general was taking a suit of space-kit out of a cupboard.

"Come to apologise, boy?" Turnock asked.

"Not in a thousand years," he retorted. "I came back to add a few details to my recent suggestion, but seeing you with that stuff in your hands, I've decided to skip it."

"Don't mistake this intention of mine for bravery," Turnock explained. "You see, if the battle goes against us, it will be much more convenient for me to be dead."

There were nearly two hundred ships. First of all, as they rose from the surface of the Moon, they clustered in space like a swarm of bees. Then the leading squadron closed formation and headed outwards. After an interval of time the second squadron followed it, then the third. Eventually the squadrons were strung out in line, squadron behind squadron, at hundred-mile intervals.

The long line of squadrons curved round and set course out towards Jupiter. They coasted outwards on an interception curve for five days. The two hundred ships held upwards of five thousand men. Out of her billions of lives, this was all that earth at enormous expense had managed to put out into space to defend herself.

There was very little work to occupy these men during the voyage; neither ropes to haul nor sails to trim nor storms to weather. Even the motors were idle during much of the time. The intership radios were usually kept on, and there was a good deal of talk between the ships. The commanders saw no reason to forbid this. One day the voice of a man singing was heard, and the radio operators on many ships picked him up and switched him into their communications systems. The man was a Russian, and he had a magnificent bass voice. When he had finished he was applauded in several languages from the listening crews.

"That is a lament," the singer explained. "A lament for those who died at Mowhatch field, in a battle that was fought long ago."

"There is a song of that sort in my country also," a voice answered.

“ And in ours—”

“ Will there be any lament written for us, d’you think ?, someone enquired.

“ If I live to see this work completed I’ll do that,” a new voice promised. “ I’ll write something better than all the laments that have ever been written for all the battles of mankind. After all, this is a better battle ; for the first time we are not going out to fight each other. I’ll make a song about us that will make us all immortal. So be cheerful, friends.”

As Jupiter with its many Moons drew near the main part of the fleet fired its retarding jets and slowed its approach to within three million miles.

Four squadrons detached themselves from the fleet and forged ahead by themselves.

“ Who are they ?” Turnock asked, watching the dots on the screen.

“ A Russian, a British and a U.S. squadron,” he was told. “ Every sort of person volunteered. French, South American, Chinese and Pakistani, but after taking into consideration the fire-power and manoeuvrability of all the ships, these three squadrons were selected.”

“ But there’s a fourth,” Turnock pointed out.

“ That’s a mixed squadron of Scots and Ghurkhas. Their ships are not particularly good but they’re the fightingest bunch we’ve got, and anyway they demanded to be the leading ship and rather implied that they would open fire on anyone who tried to take that position.”

It had been discovered that the aliens would always come out to attack. Under any circumstances they did this, and this was part of the plan. Therefore, when the first human squadron came within the range of their search apparatus, two of the aliens’ big ships rose to intercept it. To the aliens this would seem to be nothing very much out of the ordinary ; just one of the human patrols which could be hammered and driven off in the customary way.

Before the first squadron had been engaged, the second was seen on the alien’s screens coming in from another direction. Three ships rose against it.

The third and fourth human squadrons tempted other alien vessels out into space likewise.

On Turnock's radio a quiet lowland Scots voice said, "Leading squadron will attack. Fire on the enemy's homing missiles till we get within range of their ships. The gunnery control officer in this ship will call the targets."

Five minutes later, Number Two squadron was heard to issue a similar order.

"Will the enemy have spotted the main fleet now?" Turnock asked.

"Oh yes. Certainly. But as we're in line astern moving directly towards him, they'll get no idea of our numbers."

Each of the four leading squadrons were attracting a number of the enemy ships. The aliens came ahead as individuals, in no regular formation. The leading squadrons bored in towards them.

"Very well now." Turnock gave his order after inspecting the array on the screens. "Get the fleet moving. Make a sweep round so—" He indicated how they should go to the help of One, Two, Four and Three squadrons, in that order.

The fleet surged forward.

Number One squadron was within range of the enemy missiles. One of its five ships was hit and blew to pieces before it got within artillery range. A second was hit on the drive tubes, and coasted away on a random course. The remaining three got within gunnery range and started pounding away with armour-piercing projectiles and H.E. A third ship blew up, hit by a torpedo. That left two of that squadron.

"We could do with a little help around here," the quiet Scots voice said, conversationally.

A moment later the speaker saw the entire fleet within visual range. It came past at high speed in three-ship line astern; each file of ships consisted of three in triangle formation, and there were sixty triangles one behind the other. They drove into the middle of the enemy, who did not appear to have seen them. Each ship opened fire as soon as it got within range of an alien, and continued pumping in projectiles until it passed beyond; thus every enemy ship received in turn the concentrated fire of a hundred and eighty. Every one was battered to pieces.

The fleet swung round on its curve towards the group of the enemy being engaged by Number Two squadron. Only two ships of that squadron were still firing.

In five minutes this enemy group were also destroyed.

Of the remaining groups, held respectively by Number Four and Number Three squadrons, only two managed to build up enough speed to escape.

"Now," General Turnock ordered. "We'll go after their bases. Tighten up the formation and set us on a curve that will carry us at a tangent past the surface of the nearest Moon."

The fleet spun out into space. It went so far that in all probability it was lost to the search apparatus of the enemy. It turned in a gigantic curve. It swung back towards the enemy bases.

"Our relative speed mustn't be too great for accurate fire," Turnock warned.

"I understand that, sir," his C.O. said. The officers around him busy with computers, glanced up and nodded.

The fleet swept back towards the third Moon of Jupiter, and round the curve of its surface.

The enemy were not crushed yet. A stream of missiles rose, gliding up to meet them. The speed of those missiles seemed to be slow at first, but suddenly, alarmingly, they seemed to leap forward as they rose. A ship exploded in pieces. Another just as it passed over the enemy base, nose-dived and crashed.

But the fleet swept over the enemy pouring fire into grounded ships, domed installations, radar arrays, store-piles.

"That's the job," Turnock said at last with a sigh. "A final run past. If there's no opposition, put five squadrons in orbit above the base, and try to contact survivors. Put another couple of squadrons well out to deal with any new arrivals from outer space."

The fleet swept back over the enemy positions seeking any further opposition. Ironically enough the last act of defiance, the very last shot of the war, in fact, was a torpedo which hit Turnock's flagship and exploded in the control tower killing everyone inside. Their names, including Slesdyke's (who never intended becoming a hero in the first place) were entered on the Roll of Honour extolling Man's greatest epic and passed into the realm of history.

Yet, of Turnock, the historians eventually wrote that his military conduct of the war had been dilatory, even timid, in deciding to carry out an attack on the enemy. In the long run Slesdyke's prediction ran true to form.

Alan Barclay

For hundreds of years there has been a theory that Noah's Ark (or its remains) might be found. In fact, several expeditions have attempted to find it and there have been innumerable reports that it has been seen. But if it were found — what would it prove?

THE ARK

by M. LUCAS

“Professor Hanwell?”

“That’s right.”

“I’m Charles Iberson: Inter-Continental News.”

The two men smiled and shook hands. Together they turned and moved away from the modern but very dusty Turkish bus that had just brought the bearded newspaper man from Erzurum, the nearest airport town, over 150 miles away. They walked in silence for a few moments before Iberson came out with the obvious question. He asked it almost jokingly. “Well, have you found it yet?”

“Oh yes,” said Hanwell calmly. “We’ve found it.”

“Are you kidding me?”

“No, I’m quite serious,” replied the archaeologist. “We’ve found it all right. There’s not a shadow of doubt.”

Iberson hardly knew where to begin. “Then what does it look like? Is it really like the Bible says? It can’t be true!”

“It’s true,” said Hanwell patiently.

They stopped in front of a battered Ford station-wagon, and Hanwell motioned his companion inside. The vehicle had been standing in the sun, and the metalwork was quite hot

to the touch. Iberson settled himself as comfortably as he could before repeating his question.

"What does it look like, professor?"

Hanwell started the motor and engaged gear. The Ford moved off smoothly.

"We don't know exactly," he said finally. "It's too deeply embedded in the ice. All we can see is a vague shape." There was a pause. "It's huge," he added.

"When did you discover it?"

"We were very lucky really," Hanwell admitted. "The mountain party found it on their second day up there. That must have been about a week ago."

"A week ago! Then why in Heaven's name hasn't anybody said anything? A thing like that should have been buzzed round the world the moment it became known. I mean, people just don't go and discover Noah's Ark and then say nothing about it for a week."

"We had to be quite sure first," Hanwell said. "Anyway, you'll be seeing it for yourself soon enough. Then you can shout it to the world as loudly as you like."

"Who else will be in on this—reporters, I mean?" Iberson wanted to know.

"You're the only one. There won't be any others."

"Are you serious? You mean I'm to get a world exclusive on all this?"

"It looks like it, doesn't it?" Hanwell said.

"Well, well, well. Old blue-eyes himself. But why me?"

"Dr. Christie simply happens to like the way you write, that's all."

"Christie!" Iberson was genuinely amused. "I thought he hated every reporter's guts."

"Then let's just say that of all journalists, you're the one he dislikes least."

"That's more like it. So Christie sits on the biggest story since—since the Flood—for a full week and then calmly snaps his fingers for the messenger-boy of his choice to pass on the glad tidings to the rest of the world."

"Which he has a perfect right to do so, seeing that he is leader of the expedition," Hanwell observed. "Or would you rather he got a different messenger-boy?"

Iberson made no reply, but stared out of the window at the dry, featureless country that rolled by. The road itself

was good, although apart from a few lorries and the inevitable ox-carts of the Turkish peasants, the two men noticed little traffic.

"What was the journey like?" Hanwell asked.

"Well, I vaguely remember somebody waking me up in the middle of the night in Cairo, and handing me an envelope full of tickets, and airline timetables and things. Next thing I knew, we were coming in to land at Istanbul. Then I was sick on the plane to Erzurum, or wherever it was; and the bus ride from there was sheer hell. But apart from that it was a lovely trip," Iberson concluded.

"They really rushed you around, didn't they?"

"You can say that again. So much so that I haven't even the vaguest idea where we are now, except that we're somewhere in Turkey. All I know is that you were to meet me off the bus at a place called Dogu . . ."

"Dogubayazit." Hanwell finished it off for him. "It's the nearest town of any size to Mount Ararat. About thirty miles away as the crow flies. Our base camp is about another ten miles up the road here. Actually we're in the extreme eastern corner of Turkey, quite close to the Iron Curtain."

"Oh?"

"Yes, the frontier is about twenty-five miles from here. The Russians even lodged a protest with the Turkish Government about our expedition. They said we were going to set up an observation post on the summit to spy on their territory. Did you ever hear anything so bloody stupid?"

Ever since Dogubayazit the road had been gradually climbing. And now, as they neared the top of the line of hills that had formed their horizon for most of the journey, the gradient steepened. Hanwell changed into third, and pushed down harder on the accelerator. The whole car vibrated. A clump of trees swished by, and suddenly, they were over the top. Iberson craned forward eagerly; and there, some twenty miles away, glistening white in the late-afternoon sun, was the flattened dome-shaped peak of the legendary mountain.

"So that's it."

"Yes, there it is," Hanwell said. "That's Ararat."

"What made you start looking there in the first place?" Iberson asked, without taking his eyes off the distant mountain.

"The Bible," said Hanwell simply. "After all, Genesis says quite clearly that it was on Mount Ararat that Noah made landfall."

"Yes, I know. But wasn't it a bit of a long shot—after all these years?"

"Well, no. You see, there was a lot more to it than just the Old Testament story. I suppose the legend started it all, really. For generations the people round here have been telling the story of a mountain shepherd who was supposed to have seen the Ark embedded in the ice on Ararat. The Turkish Government got to hear of it, and even sent an expedition. That was in 1833.

"Did they find anything?"

"Apparently they did. The report described the pointed prow of a ship that stuck out of the ice during the summer months. Since then, it's been seen by several people. There was a Dr. Nouri in 1892. He was the Archdeacon of Jerusalem and Babylon. Then there was a Russian pilot called Roskowitzki who spotted it from his plane in the First World War. The Czar sent out a search party—in the middle of the war, mind you—and they were supposed to have located the Ark and even photographed it. But all proof of the story was lost in the Revolution. It wasn't until the Second World War that the Ark was seen again. Then there were several cases of aerial observation. All the reports mentioned very much the same thing: the pointed prow of a huge ship visible in the southern flank of the ice-cap."

"Since the war there have been several expeditions. Have you ever heard of Dr. Aaron Smith?"

"The Flood expert?"

"That's right. He led a forty-man search team in 1951. They spent a fortnight up on Ararat, but didn't find anything. Then the following year the Frenchman, de Riquier, tried, but he didn't find anything, either."

"How is it that you succeeded where they failed?"

"Well, you see, it all depends on the state of the ice-cap; and that, in turn, depends on the weather. A severe winter would pile up the ice on top of the Ark. But the combination of a mild winter and a hot summer would reduce the size of the cap, and part of the Ark would project out of the ice. That's where we were so lucky. It's been a poor summer this year, so the Ark is well below the surface of the ice. But even so, we managed to find it. It was a chance in a thousand."

"How are you going to get the Ark out of the ice?" Iberson asked.

"We're not. At least, not this year, anyway. It would take too long, and we haven't got the equipment. What we're doing is to use tiny explosive charges to blast some of the ice away. Then we're going to hack through and expose just a small section of the hull. That way, we hope to find out how old the Ark is, if nothing else."

"Then we won't really see very much of it?"

"No, I'm afraid not. Unless . . ."

"Unless what?"

"Well, we have a problem on our hands," Hanwell explained. "According to Kaufmann and Gurney—they're the two geologists in the party—there's a line of weakness running across the southern extremity of the cap. We've got a great slab of ice, about five hundred feet by three, that's liable to break off at any moment. If it does, the Ark goes with it. It couldn't fall more than about eighty feet because of the configuration of the ground, but that's eighty feet too many."

"Surely the fall would shatter the ice and leave the Ark exposed," Iberson said.

"Yes, it probably would. It would also break the Ark into a million pieces at the same time. No. We'd rather wait until next year, and come back and do the job properly, than deliberately provoke a split in the ice."

"What about radar? Surely that would give you a pretty good idea of what the Ark looks like."

"Unfortunately, radar waves won't penetrate ice."

"Then what about the sonic detection gear they use in submarines? Wouldn't sound waves go through?"

"Yes, they would. But the complex structure of the ice would give off so many false signals that you wouldn't get a clear picture. I'm afraid there's no easy way out. We'll just have to carry on using explosives, and pray that we don't overdo it. The experts say it should be all right, provided we're very careful, although they're none too keen on the whole thing."

"What does Christie say about all this?" Iberson asked. "Isn't he fuming with impatience to get at the Ark?"

"Christie, strange to relate, is in full agreement with Kaufmann and Gurney. That's why we're making such damn slow progress. He's against anything that might endanger his beloved Ark. Frankly, I'm surprised he permitted the use of

explosives in the first place. I'm sure it's only because he's so keen to find out how old the Ark actually is. He's got some ridiculous theory, you know."

"I could be wrong, Professor Hanwell, but I've got a feeling that you don't care much for our Dr. Christie."

"I don't," Hanwell said immediately, "although I have a tremendous respect for his ability. Make no mistake; in his field he's the real top boy, and there's nobody else to touch him. The fact that he's one of the most irritating bastards that God ever put breath into is quite irrelevant."

"And you really are a professor of Archaeology?" Iberson asked.

"Yes, certainly I am. Why not?"

"Oh, no offence. You don't talk like one, that's all. You must be the exception that proves the rule, or something. I remember, I once met a professor of Greek history who ran a Dixieland jazz band in his spare time. You don't do anything like that, do you?"

Hanwell laughed. "I wouldn't have the time. I'm too fully occupied being a perfectly ordinary normal professional archaeologist. You know your trouble? You've got fixed in that head of yours the idea that all archaeologists are white-haired, absent-minded, doddering old bachelors. It probably comes from reading too many of your own articles."

It was Iberson's turn to laugh. "Touché."

Ahead, the road forked. The main highway to Igdir and the north bore to the left, while to the right, a dusty unmade road branched off towards the foothills of Ararat.

"This is where we leave the main road," Hanwell said, as he swung the Ford off to the right. He nodded towards a distant group of wooden huts, clustered together by a small water tower. A dilapidated DC3 was parked near at hand. "Well, there it is. Home, sweet home. It was an emergency airstrip during the war. Some of the huts are a bit draughty, but it's all right during the summer.

Iberson felt a wave of excitement rise in his stomach. "I still can't believe it," he said. "You just can't accept something like this all at once. It's just too fantastic to be possible. Not so much the Ark itself, even, but my being here. Why should it be me? I mean, this is one of the greatest discoveries of all time; and I'm to be in on it." He paused. "I still can't figure why Christie should have picked on me."

"I think it's got something to do with that article you wrote on the Abu Simbel temples."

"Oh that! That thing on the Aswan Dam project. Yes, that was one of my better efforts. I think I got my message across, even though I as good as admitted I knew damn all about archaeology."

"Exactly. It was that more than anything else that melted the old boy's heart," Hanwell said, in a serious voice. "He thinks all journalists are a bunch of ignorant louts, so it was logical for him to choose the only one with the saving grace of admitting it."

"You expect me to believe that?" Iberson demanded.

"No, not really," said Hanwell, with a laugh, as he brought the Ford to a smooth halt outside the largest of the wooden huts.

The two men stretched, and leaned back. It was now the long, cool hour of late afternoon, and neither one felt inclined to move. They sat there in the station-wagon, relaxed and empty of thought.

"Is that you, Frank?"

A tall, well-built man stood in the doorway of the hut. Dressed in a heavy flying-suit, complete with leather helmet and oxygen mask, he carried a ciné-camera in one hand, and a small black attaché case in the other. He stepped quickly towards the car.

"I thought it might be you," he said, breathlessly. "You're just in time. Another five minutes, and we would have left without you."

As he spoke, three other men emerged from the entrance of the hut, and ran towards the plane. They didn't see the station-wagon parked to one side of the door. Before either Hanwell or Iberson could put the words of a question together, the tall man spoke again. He was excited, and barely kept control of his voice.

"It's happened, Frank," he cried. "It's happened. We got the message twenty minutes ago. The reception was lousy, but the message was clear enough. It's happened."

"For God's sake, Andy," Hanwell shouted back at him, "Tell us. Tell us."

Andy made an effort to speak clearly. "A radio message from the mountain party. Kaufmann and Gurney were right about the line of weakness. The whole section split off and

fell. It shattered into a million pieces. And the Ark was there. They could see the Ark clearly."

"What does it look like," Iberson demanded.

Andy was much calmer now. "They didn't say much," he said quietly. "I even got the impression that they didn't want to tell me. They kept saying how big it was. That's all. They just kept saying how big it was." He paused. "Are you coming straight up with us, Frank?"

"Yes, of course I am."

"What about the eyes and ears of the world, here?"

"You just try and keep me away," Iberson said grimly.

Within minutes, the DC3 was airborne, and climbing steadily. In the unpressurised cargo section of the fuselage, Andy was checking his ciné equipment. The necessity for clear photography had separated him from the others. He had to have an open doorway. Further forward, Iberson, Hanwell and the other members of the expedition who had been at the ground base when the news came through, sat cramped together. The journalist resented the proximity of the others. At times like this, he needed room to move, room to breathe, room to think. More than anything, he wanted to be alone when he saw the Ark. The idea of pushing and jostling with the others to share a few square feet of glass window was unbearable. He felt cheated. The experience of a lifetime had been offered him, and it was absurdly unjust not to be allowed to enjoy it in the best possible conditions. He envied Andy, alone in the rear of the plane.

The thought struck him so suddenly that he spoke it out loud: "Why does Andy need an oxygen mask? How high are we going?"

"Well, how high do you think this mountain is?" one of the others asked him.

"I don't know. Eight, nine thousand feet, maybe more."

"Sixteen thousand, nine hundred and sixteen," said Hanwell precisely. "In round figures, seventeen thousand feet."

"Then how high is the Ark?"

"It's about eight hundred feet short of the summit."

"But that's impossible," Iberson protested. "It couldn't get up that high."

One of the other men laughed. "Didn't you tell him about Christie's little theory, Frank?"

"I didn't have time," Hanwell replied. He turned to Iberson. "I'll explain. Briefly . . ."

"No, not briefly," Iberson interrupted. "I want to hear it all. Tell me everything."

Hanwell began slowly. "The Genesis story isn't the only Flood tradition. You'll find it in Australia, India, Polynesia, Tibet and South America, for example. In fact, stories of a great flood have been handed down among primitive peoples the whole world over. The most detailed is in the Sumerian epic of Gilgamesh. It's even more explicit than the Bible, with which it tallies on many points. Now, we believe that all these legends describe the same event: a great flood that we know took place in 4,000 B.C. Traces of it were first discovered by Wooley when he was excavating at Ur in 1929. He found a layer of clay about thirty feet below ground level. When he dug deeper, he discovered more pottery and remains below the clay. So from this we know that the Flood, or rather, a flood, did take place. We even have a rough idea of its size. But big as it was, this flood in 4,000 B.C. couldn't possibly have lifted the Ark up onto Ararat.

"This is where Christie's theory comes in. He maintains that the Noah legend refers to something that took place long before 4,000 B.C. The story had been handed down from father to son, and in the process, certain details had become changed. Then, when it was first written down, some two or three hundred years after the flood of 4,000 B.C., the writer either coloured it with material from first-hand accounts of this, or else borrowed heavily from the epic of Gilgamesh, which was well-known at the time. So much of the original substance of the Noah legend perished.

"Christie believes that the catastrophe that Noah survived was something far more terrible than the flood of 4,000 B.C.—which was disastrous enough, I can assure you. And I'm inclined to agree with him—so far, anyway. After all, it needed something of fantastic magnitude to lift the Ark up seventeen thousand feet. But from then onwards, Christie goes right off the rails."

"How's that?" Iberson asked.

"I'll try and explain. Do you know what the Fertile Crescent is?"

"Yes, I think so. Wouldn't you call it the cradle of civilisation?"

"That's right. It's that part of the Middle East between the Nile and the Tigris and Euphrates. It all started there. Greece, Rome, modern Europe; everything goes back to the

Fertile Crescent, although we're not really sure why. Christie has an answer. He maintains that the divine spark there came from Noah himself. He believes that Noah belonged to some ancient civilisation that perished in the catastrophe that he so luckily survived. According to Christie, Noah didn't come from the Middle East region at all, but from somewhere many thousands of miles away."

"You mean Atlantis?"

Hanwell shrugged his shoulders and fell silent, while the plane droned on upwards.

"Hey, look!"

It was the voice of one of the other men. Everybody crowded to the windows. The rough grassland of the lower slopes had now given way to the endless fields of granular ice that stretched from the fourteen thousand feet level right up to the ice-cap itself. And there, silhouetted against the ice, was the mountain party, roped together in single file, returning to their encampment for the night. One of them looked up briefly at the plane, but nobody waved.

"They're not very sociable, are they," Iberson said.

"No," Hanwell agreed, "I wonder what . . ."

He was interrupted by a crackle from the intercom. The voice of the pilot filled the cramped cabin. "Stand by, everybody. We're almost there."

Once again Iberson felt the wave of excitement rise in his stomach. Straining forward with the others, he attempted to control his breathing. Once, twice, three times he wiped the window free of condensation.

Then they saw it. There, in a great heap of shattered ice, lay the Ark. There could be no doubt as to what it was. In spite of the damage caused by the fall, there could be no mistaking the familiar outline. Even a child would have recognised the immense shape that lay beneath them, blood red in the setting sun.

It was a spaceship.

M. Lucas

Water (for human consumption) was all the two crashed explorers needed for survival. When they found it it gave them a different outlook.

THE OTHER FACE

by DONALD MALCOLM

Things could have been much worse, Parnell thought glumly, as he surveyed the wreckage of the small scout ship, cushioned in the thick, foot-high, vegetation.

Ewing, his partner in the Survey Service, was still investigating the wreck, trying to find out what was worth salvaging. Crashed ships usually looked worse than they really were.

He wished he could smoke, but that was rather awkward in a spacesuit. When the drive had developed a fault, it was a case of any planet in a storm. Unfortunately the one they had crashed on had a thin atmosphere virtually deficient in oxygen.

Parnell stared around him at the grey-green vegetation, very thick, with large, oval leaves. They had come down on the day side, but the sky was a purplish-black hue, like that of Mars. Strange stars twinkled and shimmered in profusion, like lanterns. The planet was about one and a half A.U.s. from the G-type star, which, at that time, was high in the heavens.

As far as the eye could see, the green vegetation stretched like a vast ocean. But far, far, to the west, a range of dark hills brooded rustily. On the way down, they had noticed that large tracts of desert were frequent.

Despite the fact that the vegetation was in constant, undulating motion, indicating a faint wind, Parnell sensed the silence of this world. Somehow, he found the thought of silence comforting.

A figure clambered out of the tilted ship: Ewing. In his suit, he resembled a cartoonist's caricature of a spaceman. The lesser gravity caused him to bounce a bit as he walked the short distance to the piece of wreckage Parnell was sitting on.

"We can go back inside," Ewing told him, his voice sounding as disgruntled as ever over the suit radio.

Parnell rose. "Good."

His companion rejoined, retracing his steps. "The automatic beacon's still belting hell out of the ether, the radio's gone, so's the water supply, and the cabin is still airtight."

"Your tutor back at the Academy would love you for that concise report," Parnell ribbed him.

Ewing, never one for wearing out his vocal chords, grunted. It was a pleased grunt. Parnell hadn't scouted with him for three years and countless light-years without being able to interpret Ewing's animal noises.

Once in the ship, they passed through the tiny airlock into the control cabin.

"Ah, that's better," Parnell sighed, hanging his helmet up on a hook. "Now for a smoke." He suited actions to the words. Ewing didn't smoke. Experimentally, Parnell switched on the outside scanners. Miraculously, two of them were working, although jammed. One showed nothing but an expanse of vegetation: the other gave a view of the sky.

"How long before they come rushing to rescue their best scout team?"

Ewing, who, as methodical as ever, was scribbling in the log, scratched his carrot-red hair with his stylus. "The signal's been bleating like an un milked cow for—let me see—ninety minutes, now. Mother is five light years away. They'll have to send the emergency shuttle, slow as a broken-legged snail, and that means about one light year every three hours. If it's on the way, it might be here in something like thirteen hours, or so."

"Hmm." Larry Parnell breathed smokily and his already long, bony, face seemed to lengthen as he pursed his lips. Frowning, he tried to remember the position of the star. "I

wonder what duration of day this rolling stone has."

"Judging from what I've noticed, I'd say somewhere in the region of thirty hours. That star looks leisurely. Tugboat Annie should be here shortly after sunset."

Parnell laughed. "Ring's going to make hay out of this, Tom."

"You're right. We've always been pushing it down his throat that he's never had to pick *us* up."

Parnell gazed absently at the screens. The light from them turned his blue eyes into almost colourless orbs. He activated the exterior microphone. The only sound was the unbelievably lonely sussuration of the wind. The vegetation flowed rhythmically, like cult worshippers.

"Listen," he bade softly.

Ewing glanced up quickly, then frowned. "I hear nothing."

"That's just it: nothing. An almost total silence." He stared at the screen again. "It's beautiful."

Tom made no reply and continued writing.

"Have you ever wondered," Parnell remarked suddenly, "why we do what we do, travelling all over space, I mean?"

Ewing sighed, but it wasn't a sound of exasperation. He recognised that his companion was lapsing into a philosophical frame of mind.

"Yes, I suppose I have." He knew that Parnell was referring to deep, secret thoughts, not those vocalised during their many conversations. "We're doing what all of mankind does continuously, seeking. Only, we have a vaster area in which to seek."

When they spoke of these things, words became intensely personal to both men. Their faces softened, like those of children listening to a fairy tale.

"We're seeking solace, I think. And that means something different to me, to you, to everyone. Most of us die without ever finding it."

They sat and the silence seeped into their minds with the gentle motion of a handful of sand sinking into the deeps of the sea.

Parnell broke the silence almost apologetically. "Every time we make planetfall on a new world, I get a tingling feeling, almost a pain, just here." He touched his heart. "And I wonder . . . could it be . . ." He let the sentence dangle like an untied lace.

"I'd like a drink," he said, a trace of misery in his voice. "Water—anything."

"Stop feeling sorry for yourself," Ewing chuckled, accepting the abrupt turn in the conversation. "When Ring has picked us up, and crowed a bit, of course, you'll have any drink you want."

The other made a face and returned to contemplation of the screens.

Time passed and the sky began to darken perceptibly.

"Tom," Parnell said, "come and look at this." He pointed to the screen showing the landscape.

"There's been some kind of precipitation. See how the leaves have curled up to form bowls. Moisture has collected in them. It's probably water."

He reached for his helmet.

"Where are you going?" Ewing asked, with annoying obviousness.

"Outside—to collect some of that moisture. Strictly in the interests of science, I might add." He dogged his helmet, checked his air and lifted a container.

He left the cabin. For a minute or two, Ewing watched him tipping the meagre contents of leaves into the container, then, bored, he turned his attention to other things. He estimated that it would take his shipmate the best part of an hour to fill the receptacle—if he didn't get cramp first.

A good while later, Parnell came back in, grinning. What looked like crystal clear water slopped in the container. Carefully, he handed it to Ewing, and removed his helmet. Just as carefully, he retrieved the water and stared into it thirstily, repeating, "Look at that, would you look at that."

"Larry," Ewing said gently, "we'll have to test it."

Obviously, Parnell hadn't thought of that. Several expressions chased across his face.

"Strictly in the interests of science, of course," Tom confided, taking the water back.

"I'd forgotten." Parnell kept flicking his tongue out redly between his lips as Ewing tested a sample. The scoutship equipment was simple but adequate.

Finally, he pronounced it drinkable. He poured some into a second container and they toasted: "To rescue."

"Aaahh!" Parnell smacked his lips noisily. "Great stuff." Ewing nodded agreement.

"How long till Tugboat Annie staggers in?"

"Couple of hours yet, maybe more," Ewing replied, then added, "Take a nap if you want. I'll keep the watch."

"Thanks." Parnell eased himself into a bunk. "What do you expect to see?" The question could have been taken any way.

"Nothing, I hope. But it's getting near dusk, and Regulations are there for our safety."

His friend yawned and closed his eyes. Shortly, the silence was punctuated only by his satisfied snores.

Ewing sat in the driving seat, his hands folded over his belly in the contemplative manner of an Eastern idol.

After a few minutes, his eyes suddenly unfocused. He shook his head and everything seemed to be all right again.

Minutes later, the tilted lines of the cabin began to writhe, then to melt and flow into each other in the most fantastic designs. A knot of colours, as hopeless as insanity, screamed at him and were gone. Parnell's sleeping body seemed to fall apart and drift in curiously twisted shapes.

The lines of the ceiling resolved into planes of intense colour that seared his eyes and interpenetrated without any concession to solidity.

The colours were achingly beautiful: burning gold, lime, sombre purple, indigo blue, petal-soft cyclamen, lacy saffron, blatant yellow-lemon, coral grey, warm tangerine, pulsating scarlet and crimson.

The beauty seemed hideous to Ewing and he tried to cry out in terror, but his vocal chords, like his body, were paralysed.

The colours and the planes shifted and took up new, startling designs, like the production of a mad artist suffering from a nightmare. Thin lances of cold ice blue and mountain water green began to stab and to penetrate the patterns, which contracted and sought to withdraw, like living things.

Suddenly, from the maelstrom of kaleidoscopic designs and hues, a voice spoke to him, as keen and incisive as a razor's edge.

Ewing blubbered and fell out of his chair in sheer terror.

That voice—from the dead, distant, past—it belonged to his partner, Ford.

While madness stormed blackly like vengeance around him, everything came back with a rush. The long suppressed memories crowded his cringing mind.

He and Ford had set up a company together. It had prospered. A much larger combine hadn't liked this and sought to undermine and break the company. Oh, they had been clever. Flattery, women, bribes, economic double-talk. Finally, Ewing had quietly eased himself out, leaving Ford with a badly leaking bag to hold. He'd committed suicide.

And Ewing had been running ever since, from his conscience.

The mad array of lights seemed to fade and darken, to be replaced by a steadily growing presence of pure incandescence.

The voice was still speaking, although as from countless leagues away in a world that Ewing could never hope to attain. For the first time, he listened.

Tears sprang from his eyes.

The voice was saying, *I forgive . . . forgive . . . give . . .*

The incandescence imploded and the multi-hued madness, the impossible designs and the flowing planes returned.

But he didn't care any longer.

With a vacuous grin on his face, Ewing made his way to the door.

Parnell awakened abruptly and found himself imprisoned in a nightmare. Everywhere he looked, many circles of light, all different sizes, spun crazily, eccentrically and concentrically, in every conceivable colour.

Azures, greens, violets, reds, yellows, indigos—it was like a photograph taken at the instant of the shattering of a rainbow.

Parnell gasped as fear replaced puzzlement. The circles pulsed in a continuity of colour and movement, like a myriad beating hearts.

He shook his head savagely, but the nightmare was part of him, overwhelming all sanity and reason. It insinuated itself everywhere. He couldn't raise even a croak from his throat, which felt thick and clogged, as if packed with flour.

The nightmare held him with a terrible insistence that was both beautiful and repelling. Here and there, circles exploded with immense gouts of silence and assumed weird, tortured shapes.

Colours started to run every way, resembling a palette with turpentine spilled on it.

Then there was a voice, singing with a beauty and a lucidity that contracted his heart with tender memories.

He remembered . . . Ellen, her pale grey eyes puzzled, not understanding why he could love space more than he loved her. And he couldn't explain all the things that had been so clearly written in his mind when he had made his decision. Poor, poor, Ellen . . .

My love is like a red, red rose—

It had been his favourite song, because it reminded him of her.

He had heard it many times, where the valued things of the Earth his home had found a place among the stars.

It had never ceased to hurt him until now.

Till a' the seas gang dry, the voice sang softly as he stumbled out of the cabin. He knew it was all right, now.

Quickly Captain Barrett pushed aside his papers as Law, the ship's Chief Scientist, entered.

"Please sit down, Edgar." The frail little biochemist did so. The Captain tried hard to prevent his strong fingers from bending his stylus. But it wasn't easy. The deaths of two men bore heavily on him.

Despite his name, Law was Norwegian by ancestry and, when he spoke, his voice conjured up for Barrett visions of dark, tall fjords and smooth blue water backed by towering, snow-white mountains.

"Captain," Law began, peering through his gold-rimmed spectacles, "I suppose you've heard the expression, 'insanely happy?'"

Barrett nodded and sank his square chin deeper in his chest.

"That's exactly the state Parnell and Ewing were in and it killed them. Let me explain."

The Captain drew his brows down a bit.

"Lieutenant Ring brought back two containers. Both had water dregs in them. He also brought back some of the leaves from the planet."

He paused to refer to notes, then continued, "In itself, the water was harmless. However, the leaves secrete tiny amounts of lysergic acid diethylamide 25—L.S.D. 25, for short. During the period of absorption, some of this was passed back into the water still lying in the leaves.

"L.S.D. 25, in an amount as small as five millionths of a gram, induces a condition of insanity. The victim sees walls and furniture begin to flow and interpenetrate; undreamed of colours appear; hallucinations manifest themselves."

He turned a page and adjusted his glasses.

Barrett took the opportunity to say, "You said they were insanely *happy*. What did that mean?"

"The quantity of water they drank must have contained at least twenty-five millionths of a gram. I think they both experienced short, overpowering bouts of mental turbulence that went beyond insanity and during which some deeply personal problem was solved: perhaps *the* personal problem. They found something they had been seeking."

Silence intruded. Barrett broke the stylus. One phrase of Ring's report returned to him. *They had smiles on their faces*. He sighed deeply, but felt assured by Law's explanation.

After the biochemist had left, Barrett called Medical and told them that the space burial would take place from No. 2 Cargo Lock. He then called in his Sergeant-at-Arms and ordered the assembly of the crew in the Recreation Hall. They would watch on the screen.

The Captain was a deeply religious man, but not a fanatic or a zealot. Theology was a mandatory course for all men aspiring to his rank. The Academy realised only too well what space could do to a man with power and a belief only in himself.

Standing beside the coffin ship which cocooned the two bodies, his officers ranged behind him, he fixed his eyes on the calm, waiting, stars.

"Everything has two faces: something as insignificantly small as a man, something as infinitely great as the Universe.

"We commit these, thy servants, to thy care, O Lord, that they may look upon the other face of Heaven, and know peace. Amen."

He gave the signal and the crewmen launched the little ship into the ocean of eternal night.

Briefly, a rocket trail flared.

They watched as the ship dwindled quickly from sight, drawing towards that beach which is the hope of all men.

Donald Malcolm

Article

With Ham, the space chimp, a succesful survivor from an Earth launching, and the promise of a Man into space shortly, this month's article on the possibilities and probabilities of rescuing personnel in space is particularly timely.

SPACE RESCUE

by KENNETH JOHNS

Rescue, speedy and effective, of personnel from space missions that have gone awry, whether the spacemen be still at zero zero altitude awaiting countdown, or out near Mars, is likely to be one of the trickiest problems encountered at the beginning of the space age. Despite the immense difficulties it is a survival problem that must for the sanity—let alone the peace of mind—of the crews, be essentially solved before the first man hits space.

Presentday large missiles are no better than ninety per cent reliable. The ships of tomorrow will be far more complex than simple missiles today and, since one hundred per cent reliability can never be attained, allowance must be made for duplication of processes and effective rescue from all conceivable emergencies. For, like it or not, we must face the stark truth; there will be accidents in space.

The much vaunted ethics of our society, on the surface at least, demand that rescue operations be carried out no matter what the cost—and it is probable that the cost of rescue would be far greater than the total expenditure on the original project. There must be no chance that a desperate call for

assistance from space will be met by an attitude of mind typical of the 'I'm all right and we're almighty sorry about you, Jack' type of thinking. Yet it must also be remembered that nothing would doom space exploration faster than a series of fantastically expensive rescue operations which would have to be met by increased taxation.

Even making allowance for crew errors, the likelihood of spacemen retrieval, because of equipment failure, will probably be greater than is generally realised. Remember that, to us, space is still an alien place, a radiation environment with a great many unknown hazards. To this must be added the fact that space probes are and will be operating just on the limits of feasibility with little or no reserves of anything available for emergencies, and it will be seen that the first men off Earth will be very courageous indeed.

The pattern of spaceflight in the very near future, using chemical rockets, is well established. Multistage ships will be used and the pilot or observer will be snugly installed in the nose of the final stage. This will be an unenviable position—in many ways, and yet, one knows, eagerly sought after—perched up there on a few hundred tons of high energy fuels about to be mixed and ignited. The ability to put much distance rapidly between crew and any such vehicle about to explode sensationally, or collapse even before countdown zero, will be an essential part of the assembly's basic design.

The value of implicit belief in massive air-sea rescue operations was manifest during the war, when many bomber and fighter crews were picked up from the seas. In normal war aeroplanes, escape is now met by ejector seats and ultra-fast opening parachutes to whisk the pilot clear of the ground and to land him safely even if the disaster occurs at ground level.

The situation in the final stage of the spaceship is likely to be more complex than this. The crew will be practically built into their cabin with whole-body harnesses to restrain them, and they will be loaded with suits to protect them from heat, high accelerations, low pressures and lack of oxygen. These in themselves are not enough to prevent the use of ejector seats but, on the whole, it seems preferable to employ the whole of the final stage as a detachable unit from the primary stages. The final vehicle will have its own rocket system which can be used to blast it free and boost it high enough for

parachutes to make effective use of the air. There will be no need to provide elaborate ejection systems for individuals and the whole emergency programme can be tied into the automatic computer programme.

In any case, ejector seats would only be effective during the first ten miles of vertical flight; above that height other systems would have to be available. With the need to conserve mass it appears logical to concentrate escape measures in one emergency system so as to cover as many eventualities as possible.

There is always the possibility that the crew will be injured or rendered unconscious so that there must be pre-programming for escape which could be triggered by ground controls or by deviation of a number of variables from pre-set limits. Also the psychological angle cannot be ignored and provision must be made to protect the crew from themselves should one, in a moment of blind panic, but not under emergency conditions, hit the button activating the escape system.

Whilst individual ejection capsules could be used to rescue crews during flights up to a height of twenty miles or so at speeds below one thousand five hundred miles an hour after re-entry, the same argument against ejection seats on re-entry as on take-off applies. In addition, successful systems must not expose the crew to very high accelerations or decelerations for long periods and must protect them from cold, heat, lack of air and tumbling and spinning on the way down. Since it will be difficult to determine where such a capsule will land, it will have to provide protection on landing on any hostile area of Earth and during the subsequent waiting period whilst rescue units home in on its radio signals.

All these functions will have to be built into any ship or vehicle which is intended to be recovered from orbit.

Emergencies in orbit around Earth or en route to and from the planets bring new problems into rescue operations—one problem in particular being the time factor.

As the tempo of space research builds up, so the number of functioning Earth satellites and space stations will rapidly increase. We may expect complex satellites to act as weather monitors and the active components of navigational, communication and reconnaissance systems. Bringing in fresh complexities there will also be manned operational bases for research with repair and manufacturing facilities as well as

staging bases for deep space exploration. Before manned satellites are in use, we must assume that ships capable of round trips to them from Earth are available.

Under these conditions it will be more economic to retrieve malfunctioning automatic satellites and repair them, using the shuttle ships already there in orbit, rather than launch a replacement from Earth.

Rescue of space station personnel is a subject that must receive detailed study since, without secondary vehicles, they will have no means of escape. Likely emergencies involve destruction of their life support systems, the accident of being thrust into grazing orbits by collision or explosion, and damage to power sources and nuclear reactors. On the whole, it would seem best for each station to maintain sufficient vehicles capable of re-entry to evacuate the whole station's crew, although this logical aim will be difficult because of the fuel and high capital costs involved in such standby equipment.

The alternative is to give each station as many safety devices as possible. Anything that goes wrong should be able to be immediately contained and then the section jettisoned, fast. Of course, jettisoning would involve some reaction thrust mechanism—just tossing the section off would merely ensure that it paced the station faithfully in orbit. Then communications would become of paramount importance. Rescue ships would home in on what might very well be a stripped hull, with crewmen huddling in tiny individual refuge capsules capable of maintaining life for a few hours, just long enough for the rescue teams to arrive.

To make sure the rescue teams do arrive in time, their requirements of time and fuel demand separate rescue vehicles for every orbital plane in which satellites are circling. It thus becomes clear that it will be best to group as many satellites as possible in a few planes, no matter what are the altitudes of the stations.

A vital factor for successful rescue operations is the need for a continuous flow of detailed navigational data upon which decisions as well as second to second thrust calculations can be based. In preference to a world-wide coverage of surface tracking stations it will probably be best to maintain a series

of continuous tracking satellites in orbit as fewer of these would be needed and their data would be more accurate.

Interplanetary flights call for even more rigorous safety precautions. Individual escape capsules from a single ship will be useless, leading only to a lingering and highly unpleasant death. Certainly the individual escape capsule can serve a useful function; but only if there is a safe haven within reach of its limited capabilities. The answer to this may well be a refusal to employ single ships at all in the early days; expeditions will comprise at least two vessels, each of which could carry all the crew members back to Earth—or at least to a reasonable orbit from which they could be rescued. As a precaution against explosion, the ships would not be physically tied together but radio or electronic trackers would enable one to be a faithful slave of the other, and some quick method of transfer of the crew, by capsule or cabin, would be involved.

There is no need for the two ships to be identical. In fact it is more likely that the best plan would be to design one ship specifically for planetary landings and the other as a stripped down frame suitable solely for supplies and pure space operations.

Where the need to conserve fuel is all important it is calculated that all thrust manoeuvres should be carried out as close to a planet as possible. This may well result in some tense situations, where ships must be abandoned and the crews rescued, and yet the margin of fuel is such that any manoeuvring at that stage will result in a deadly lack of fuel on arrival. The thought of riding through space with a companion ship full of corpses is not a happy one—yet it may well occur.

Since navigational accuracy is extremely important during changes of orbit whilst in interplanetary thrust, astrogational instruments themselves are of prime importance. Failure of these can only be overcome by relying on communications for guidance. To track distant ships an inflatable aluminised balloon or mirror several hundred feet in diameter would be of great help to the trackers—a ship has got to inflate her blip on the watching screens artificially if she is to be easily discerned over the far-reaches of space.

Under these circumstances radio equipment becomes of first degree importance, and duplication of radio equipment with decentralised emergency power systems, batteries or solar cells, is necessary.

One important feature facing the rescue service is the need to prevent crew personnel from spending any long time immersed in the intense Van Allen radiation belts surrounding Earth and some other planets. Failure of a ship's drive during acceleration away from Earth could throw the ship into orbit within such a belt. Means must be provided for these men to let down into a lower orbit. A second ship could do this; the alternatives include a small lifeboat or the means to jettison much of the main ship and use an emergency rocket drive to bring the remaining mass down in altitude. With the outward thrust still operating when the ship's main thrust fails, it may be preferable to take the ship outside the radiation belts and put her into an orbit there. The idea that a ship will be still using power through the belts follows the conception of small fast ships to take crew out through the belts rapidly to their waiting and slower deep-space ships in the clearer space beyond.

Destruction of a ship's main drive during hyperbolic coasting leaves the ship on course and at speed—but with no means of control at journey's end. Here the urgent need is—assuming the absence of tugs—to put the crew into a return ellipse or an emergency ellipse outside the belts of the planet they have left.

Should the trip be nearly completed a similar manoeuvre at the planet of destination is possible if a secondary ship or drive is available.

The rescue-man's glib recommendations that duplicates of this and that should be carried may well cause the spaceship designers to shudder. With weight and mass and reaction thrust dancing a saraband of imbalance in his mind, any suggestion of duplication may well make the designer froth at the mouth and point out the manifest impossibility of putting another ounce aboard.

But—if adequate, tested, efficient rescue devices are not incorporated in a spaceship, the proud designer may well find a sudden lack of crewmen. One way tickets have never been popular, and they become even less so when return halves are known to exist.

One thing is certain. Rescue operations in space will be extraordinarily complex, depending for their success on the foresight and planning carried out *before* an emergency occurs. To beat the accident—plan for the worst that can happen and it will be overcome.

Already the shots of trials in Project Mercury indicate that spaceship designers are determined to be absolutely sure—as far as anything will ever be sure in space—that they can retrieve their men alive. It is not an impossible fact that more money and research will be spent on rescue services than on spaceflight pure and simple.

Judging mankind on his record, this is as it should be. *Per ardua ad astra* is a legendary phrase meaning much to the people of this country. In its absolute sense it will come to mean a very great deal more, when the ships are taking off for the stars and men and machines are watching over them so that no one shall unnecessarily perish.

Kenneth Johns

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In a city (or a world) controlled by machinery, the button-pusher would undoubtedly be king. Until, perhaps, he wondered what he was doing pressing buttons.

BUTTON-PUSHER

by BILL SPENCER

One. Two. Three.

Rixon saw the red light flash three times, and quickly jabbed his "Yes" button.

His eyelids were drooping with fatigue. He leaned forward over the illuminated, button-studded panel and tried to concentrate. In the long, windowless room, hundreds of other workers leaned intently over similar panels.

One. Two. Three.

Again, three red lights. Again he stubbed the "Yes" button.

One. Two. Three.

Red flashes. Three. Press "Yes."

His finger was moving towards the button when he saw the green light he'd almost missed.

Stop !

He pressed the "No" button firmly, and sighed audibly with relief. On the panel in front of him a light moved upwards in the section marked "Score." It now read 34. He visualised avidly, the thirty-four credit cheques, crisp from the paying machine.

Enough to buy . . .

Clang !

Abruptly he realised that he'd let three red lights through without pressing the " Yes " button.

A supervisor robot hovered near him, one of the long barrels of its dozen television lenses peering over his shoulder. And a winking blue " Lose " sign began to flash from the panel in front of him.

Blast !

These credits were swiftly clipped from his score. He was down to thirty-one. Annoyance made him almost choke. He fought to control his emotions, realising he'd make still more mistakes if he didn't remain cool and collected.

Now, was it two, or three, red lights that had just gone ?

Impulsively he pressed the " Yes " button, to be rewarded with another loud clang.

Three more credits were chopped off his " Score " column, and he was down to a miserable twenty-eight.

He could have wept with rage and frustration. The Supervisor was definitely getting interested in him now, hovering nearer every minute. Suddenly his brain cleared and he knew what to do. He pressed a button at the extreme right of the console—pressed and held it. After a brief interval a section of his panel lit up with the single word " PERMISSION."

With relief he got up from his chair and moved over to the door at the end of the long Workroom. The Supervisor watched him go with one of its baleful eyes. He had five minutes, in the wash room, to regain something of his composure.

He pressed a tap and, running cold water into a bowl, sluiced it over his face. After a few minutes he felt better. He glanced at the clock. (*All the rooms had clocks*).

Only another half-hour to go at the control bench, and if he kept his head, the eight hour shift need not be wasted. He still had time to re-build his credits for the shift to a decent figure.

He went back to the Workroom and sat in his chair. The Supervisor had lost interest and drifted away. *That* helped. The rules were that he had to press the " Yes " button correctly three times in order to score one credit. But for a single error, three credits were lopped off.

For a few minutes everything went smoothly. He notched up another two credits.

Then something seemed to give way in his nervous system. The panel dissolved into a meaningless disorder of flashing lights, amid which he seemed to be pressing "Yes" and "No" buttons at random. Sometimes, as was bound to happen purely by chance, he scored a credit. But more often a depressing "*Clang !*" told him he'd been wrong.

When the siren sounded for the end of his shift, he found he had a miserable nine credits left.

As he took them from the paying machine, he felt like tossing them contemptuously on the floor.

Nine perishing credits !

But common sense stopped him from throwing them down. The gesture would after all be lost on the paying machine, which was only a senseless robot. And he badly needed those nine credits. He needed them to get food from the Conveyor Belt Cafeterias. He needed them to rent Sleeping Cubicles. There would be little enough left over for his Happiness Drugs.

So he stuffed the credits into his pocket, and hurried towards the exit doors. Hundreds of other workers were jostling past him in the direction of the nearest lift shaft.

Rixon rushed forward as the lift doors clanged open. But he was too late. A score of people had forced their way into the narrow steel box. Rixon pressed in after them, but as the doors swung to his right shoulder was caught between them. The doors juddered, then clanged open again.

Rixon looked round and met a score of angry stares, which clearly said "You'll have to get out !" He hesitated. An elbow from somewhere caught him in the ribs and deposited him outside. The doors slammed shut, and the cargo of squashed, breathing humanity was whisked downwards.

There were three lifts at this point. One of the other two would be next to arrive. But which ? Rixon mentally tossed a coin and positioned himself near the door of one them.

There were about fifty people waiting when the next car arrived. It wasn't at the door he was next to. He surged forward with the press of scuffling bodies, but it was hopeless. Somebody's heel bit into his toe without apology.

After missing two more cars, Rixon found himself at the head of the spiral steel staircase, joining the mass of bodies shuffling downwards. They moved down the staircase in

silence, except for the scuffing noise of rubber soles on steel treads.

Rixon noticed that the people moving down the staircase undulated with a clumsy rippling movement. He watched the ripple moving towards him, he was part of it, then it passed him. He watched in fascination, then suddenly the ragged irregular movement began to disgust him. Shuffle, shuffle, step. Shuffle, shuffle, step. He tried to shut his mind to it: he shut his eyes, but it pressed insistently against his temples.

In the dark central vaults of the City, in cool concrete caverns, the thinking machines were—as always—in conference.

The Counsellors.

Their caves were kept always full of unmoving inert gas at a constant temperature. No human beings, with their corrosive breath, were ever allowed to enter.

The logic machines made no sound. But through the trillion crystals of their metal brains pulsed a lightning-swift pattern of thoughts. As in a vast and ponderous debate between ancient philosophers, but with immensely greater resources of learning and memory, the fate of the City was slowly worked out, with humourless impassiveness.

At intervals a new idea emerged from one of the machines—to be tested against an almost infinite range of contingencies.

Even though it took only a micro-micro-microsecond for each pulse of thought to form in the cold brains of the Counsellors, the search through the enormous field of possible outcomes took a long time. Frequently the interval from decision to decision was measured in months. Sometimes in years. Which was perhaps just as well.

It was like playing a game of multi-dimensional chess with a billion pieces, each having thousands of characteristic moves of its own.

But in the end, all relevant possibilities had been considered and a firm resolve was taken. Then the decision was passed to the psychology machines, to put it into a palatable form before forwarding it to printing and broadcast centres.

At the same time, any practical changes were looked after by the executive machines.

Rixon absent-mindedly took a plate of stew from the serve-yourself hatch as the high stool he was perched on slid past on a moving belt.

He realised suddenly that he hated stew, and tried to put it back and grab some spaghetti. He was too late. Stew it was.

He gulped down the too-hot liquid—realising that he'd miss the sweet course if he didn't hurry. They seemed to have speeded up the movement of the stools—again—since he was last in.

As he swallowed the scalding stew he anticipated the cool pleasure of ice-cream for his next course, to take away the mouth stinging hotness of the stew (had they put too much pepper in it, as well, to make matters worse ?)

Here was the sweet serving hatch coming up now. What a frantic pace ! He deftly dropped the empty paper stew plate into a disposal chute.

As the serving hatch whizzed towards him, he just had time to read a luminous notice which said SORRY NO ICE CREAM. The hatch was full of paper plates of rhubarb flan, and nothing else.

How I loathe rhubarb flan, he thought. Should he take one? Yes, quick. Foolish indecision. He only just managed to grab a plate before his swiftly moving seat swung too far past.

He spooned up the cloying, doughy pastry, reflecting that the moving belt system in these Cafeterias was beneficial because it taught decisiveness. Also, of course, efficiency demanded it. The old leisurely go-as-you-please methods had no place in a City that had a billion mouths to feed. Things had to be kept moving—and fast.

He was a productive worker, after all. His time was far too valuable to waste in lengthy, leisurely mealtimes.

He found himself wondering, as so often, what exactly he was producing by pressing the "Yes" button on his panel. He knew, of course, that it was something important, something vital to the City's economy—but he didn't know precisely *what*

Was it plastics ? Or textiles ? Or beryllium castings ? Why, he wondered, was he not told—any more than the millions of other button-pushers like him ?

As soon as he had asked himself the question, he saw the absurdity of it. If they all knew what they were producing, little jealousies would be bound to creep in. Some would think that *they* were producing was more vital to the community than anyone else's efforts. They might become cocky and insufferable. Other workers might feel, unaccountably,

that what they were producing was wasted effort. They might lose interest. Either way, efficiency would be impaired.

That of course was the great thing, not to impair . . .

Quick, coffee . . . !

He grabbed the steaming paper cup just in time.

As he raised it to his lips, a telecast began to come through on the illuminated panel in front of him. The stream of words rippled across his line of view.

The Supreme Council, after due cogitation, has decided . . .

Official telecasts always began that way.

. . . has decided that in future, in the interests of efficiency . . .

Always in the interests of efficiency.

. . . after three successive faults of control, operators will receive a mild electric shock.

Jumping cats ! Electric shock !! Rixon shuddered.

But he was missing the rest of the message . . .

This of course is in no way intended as a punishment. But psychological tests have shown that heightened attention results from such electric shocks, and improved performance in experimental tasks. All control desks are being modified accordingly. While this is being done the rest of the day is free.

Free !

Good old Supreme Council !

Rixon almost spilled his coffee with excitement and pleasure.

What should he do with his free afternoon ?

Rixon decided, on impulse, to visit a Travel Shop.

In a City of a billion inhabitants it was, of course, out of the question to allow individuals to voyage about freely. It would have caused chaos, and choked the already hopelessly overcrowded communications system.

But the Counsellors, in their wisdom, had recognised the human impulse to escape—if briefly—to unfamiliar locales Hence the Travel Shops.

There was one at the corner of the next building, if he could manage to get that far. Rixon succeeded, after no more than half a dozen attempts, in gaining a foothold on the appropriate strip of moving pavement. To judge by the chorus of protest, he had a feeling that one or two people had been forced off the other side, and were now being carried along by the pavement moving in the opposite direction. But it was impossible for Rixon to help them. And the main thing was that he was on.

When he had reached and elbowed his way into the Travel Shop, Rixon made his way along the moving belt corridor until he came to an empty cubicle. He stepped inside and slammed the sound-proof door behind him. Then he pushed a credit slip into the slot of the selector and ran his finger thoughtfully over the mass of buttons. Hawaii, Mexico, Bali. He'd been to them all many times—through the fantasy medium of the teletape, that is.

Suddenly he noticed an obscure button in the bottom right hand corner of the panel. He hadn't seen it before. Was it a new one? The title alongside read "Ancient Times."

Rixon chuckled and pushed the button. The machine signified its acceptance of his choice by announcing through a voice panel, "Your selection will be ready in a moment. Please make yourself comfortable on the viewing couch."

In a moment or two there was a rattle as the teletape shot down the chute and into the 3-D projector. The light in the cubicle dimmed, and then the walls dissolved into a new scene.

Rixon was surrounded on all sides by coloured moving images. He was part of the scene, a silent invisible ghost who could observe but not participate.

All around were people dressed in the absurdly antiquated garb of—what century was it? Twentieth, Rixon thought, from his limited knowledge of the world that had existed before the City was founded.

These people appeared to be spending most of their time watching a small square box in which crude, two-dimensional, black and white images appeared.

Then the scene changed, and there was a man bending over a table on which was some kind of badly-made gadget. It had wires sticking out of it in all directions. The man picked up a sort of metal pencil and joined two of the wires together.

Suddenly Rixon realised what he was doing. The man was *making* something—making one of these vision boxes which the others had been watching—and he was making it *with his own hands* !

Rixon sat stunned for the rest of the show, scarcely comprehending what was going on. The image of the man actually making a vision box *with his own hands* seemed to be etched in his brain with raw electricity.

Rixon felt he was going to burst with the enormity of his discovery. As he came out of the Travel Shop he wanted to shout it out loud to everyone. People, in ancient times, had actually made things with their own hands.

There was a small wayside park about ten paces square just beside the exit of the Travel Shop. Rixon went and sat on one of the benches. A young man of about his own age was already sitting on the bench, his eyes staring dully ahead, unseeing. Rixon had noticed the same apathetic expression on increasing numbers of faces in the City.

What was the matter with the inhabitants? What was happening to them? They had enough to eat—and they had work to do. Productive work it was, too. That should be satisfaction enough. And on top of that they had the Travel Shops, the Games Houses, the Happiness Drugs.

Yet more and more of them seemed to be sunk in some kind of stupor, not caring—not *inspired* by the urge to ever greater production.

Rixon felt impelled to rouse this unfortunate individual from his stupor.

He leant forward.

“I say . . .”

Rixon had the impression that the young man started slightly, then pretended not to hear him. It was, of course, quite unheard of for inhabitants of the City to speak to each other. What was there to say, after all? Everything had become far too complicated for mere human brains. Better leave thinking to the Counsellors. Their metal brains were a billion times faster than human brains. They had the huge, virtually infinite memory stores in which to retain the enormous range of facts needed for effective decisions.

Still, Rixon felt, it was regrettable that the art of human conversation had been allowed to die altogether.

He tried again.

“Look . . .”

Rixon knew—there was no doubt about it now—that the man was deliberately pretending not to hear. He was treating him as some kind of crank or madman—freezing him out.

Well, he wasn't going to get away with it.

“Listen to me, will you!” Rixon blurted out, grabbing the man by his clothing and forcing him to take notice. “Ever wondered what we're making, up there?”—he gestured with a sweep of his arm in the direction of the Workrooms.

The man looked scared. Actually scared ! He was shrinking away from Rixon as though from something unclean, glancing sideways and trying not to meet Rixon's eyes directly. Rixon shook him angrily.

The man responded by clearing his throat nervously. He was going to say something. After years of silence—apart from a certain amount of muttering to oneself—speech came with difficulty, as Rixon himself had found.

"Making?" the man said. "Are we making something, then?"

He dragged himself free of Rixon's grasp and almost ran off towards the nearest moving pavement.

Rixon remained sitting on the seat, staggered by the appalling depths of the man's ignorance. Or was it simple stupidity?

Making? Of course they were making something—something of vital importance to the community—only they didn't know precisely what. For reasons which . . .

For which reasons? Suddenly, the official explanations seemed to Rixon to lack weight and conviction.

He stood up, pondering uneasily, and walked slowly towards the moving section of the pavement.

Forcing his way on, he travelled along until he spotted a Sleep Cubicle which was vacant. Warily he went and put a credit in the slot. The heavy sound-proof door swung open and he crawled gratefully inside.

In the days which followed in the Workroom, the question "What are we making?" would not stop popping up in Rixon's mind. He tried to shoo it away.

Like most solitary people he was given to endless day-dreaming, mental doodling, theorising, call it what you like. Normally a thought rose up in his brain, ambled around for a brief space gathering a few strands of wool, and then faded out, to be replaced by another.

This was different. He supposed you could call it an obsession, except that he was not the kind of person to get obsessions.

What are we making?

It kept hammering away in his head.

He found himself answering the question. "Who cares?" "Why worry?" "What does it matter anyway, it's all for the good of the City." But these responses seemed weak and futile. They failed to satisfy him, and so the question kept coming back.

He began to feel that he'd have to do something about it.

But how? A direct question to one of the Supervisors, for instance, would meet with an evasive reply—he was sure of that. Probably, too, he'd be marked down for observation, and that wasn't funny.

The Supervisors were small observation machines which drifted about in mid-air, watching.

Rixon looked at the fat cable which connected the panel of his control desk with the big blank panel in the wall. He knew he had to find out what lay behind that panel. But it would be useless to go openly behind his control desk. He had to be cunning.

He waited until the nearest Supervisor was at least twenty feet away. Then he contrived to knock his box of Happiness Drugs on to the floor. In a flash he was on his knees behind the control desk, prising at the wall panel with an old screw-driver. The panel came away more easily than he'd dared to hope, and he saw what was at the back of it.

Nothing.

There were no connections of any kind, no cables leading anywhere—nothing but an empty shallow box in the wall.

Nothing at all.

Rixon realised instantly what it meant.

Realised—but was powerless to do anything about it, for an alert Supervisor had already transfixed him with a glowing paralysing beam.

He had the galling experience of having to remain motionless behind his desk on all fours, while his mind, intensely active, pieced together with fantastic speed the full implications of what he saw.

Clearly all the button-pushing they did in the Workrooms was quite meaningless. They were producing nothing. The entire City—all its manufacturing and distributing machinery—was automatic. There was nothing for human beings to do except consume. But the Brains kept them there, hour after pointless hour, simply to make sure their human parasites were busily absorbed in activity, to keep them out of mischief. That was why they had invented this monstrous, meaningless game.

Rixon wanted to tell the other button-pushers what he'd discovered, wanted to expose the vast trickery, treachery. He wanted to scream out the truth.

But while the paralysing beam played on him, he was powerless to move or speak.

Nobody—and this was the infuriating thing—seemed to have noticed what was happening to him. He could just see two or three of the nearest operators, obviously pushing their buttons, happily playing the game. Idiots !

In a couple of minutes a pair of Utility robots padded in on their rubber feet and pushed a stretcher under him. The beam played on him by the Supervisor made a subtle frequency shift and he slipped noiselessly into oblivion.

How many hours or days it was before he regained consciousness, or what had happened to him in the meantime, Rixon had no means of knowing.

His faculties filtered slowly back to him. He was lying in a soft cocoon, relaxed, in a small room with subdued gentle light. Soft music was playing somewhere in the background.

It was all so unfamiliar. This wasn't a Sleep Cubicle, was it ? Rixon tried to remember how he got there, cudgelling his brains for a clue.

He gave up the struggle and lay back in dreamy softness.

All he knew—and this was a certainty—was that he had made some kind of earth-shattering discovery. He couldn't remember precisely what, but it gave him a feeling of great satisfaction.

At intervals, an unobtrusive Utility brought him food. Very good it was too.

For many days Rixon was left in this pleasantly undisturbed isolation. Then one morning, without warning, the Utility brought in a small black sphere, and placed it reverently on the blue cube beside his cocoon. As soon as the Utility had left, the sphere began to speak.

"This object is a communicator. You are now in direct touch with the Counsellors."

The Counsellors ! Rixon felt a shiver of something like awe pass through him.

"The Counsellors wish you to know that you have been singled out for a position of special responsibility."

Rixon, as he took in the significance of this statement, lay bathing in the warmth of his new-found importance.

"You will now be given a picture of your new duties. Please pay great attention."

Rixon could *not* have been more attentive.

The black sphere swelled to vast size and grew transparent. Images began to appear inside it. Rixon found himself looking down on a miniature version of what he recognised as his old workroom. But he was looking from an unfamiliar angle.

Suddenly he realised that he was gazing down *through the wall* of the Workroom. He had never suspected that the upper part of the wall had one-way vision characteristics.

A number of important-looking people were seated in huge comfortable chairs, gazing down, unseen from their elevated position, at the common button-pushers in the Workroom below.

"These are the overseers. Their task is to watch over the ordinary workers. And now you are to be one of them."

Rixon felt a glow of pride, of gratitude to the far-seeing Counsellors. He listened eagerly as the message continued :

"Rest now. And tomorrow you will assume your new responsibilities."

Next morning a Utility led Rixon to the Overseers gallery. The resident Overseers greeted him, though a newcomer, with looks of familiarity and friendliness which at once put Rixon at his ease.

He was shown to a chair, and his work explained to him.

He had to watch continuously a section of the Workroom below comprising twelve Button-pushers at their panels. In the left arm of his massive chair was set a red jewel, which he had to touch in the event of two operators in his section faulting simultaneously—unless at the same time three credits were scored by three other operators in his section, in which event he had to press the green jewel in the right arm of his chair.

Quite simple, for a man of Rixon's intelligence, once you got into the swing of it. But of course it demanded a very considerable level of concentration.

It was explained to Rixon that he has been chosen for these higher-grade duties simply because of his outstanding powers of concentration and intelligence.

Rixon didn't want to seem inadequate, but he had to admit that after a taut three-hour session in the Overseer's chair he was pretty well all in. But there was, he found, the compen-

sation that Overseers lived in special quarters of their own on the topmost 77th floor of the Workroom building. Here there were spacious, quiet gardens and coolly playing fountains, pools for swimming, and restaurants where he enjoyed beautifully-prepared food of rare delicacy and savour.

The Overseers never had to make the long descent to street level, never had to rub shoulders with the seething, swarming, elbow-jabbing hordes of common operators.

They could relax up there, on the higher levels, and recuperate sufficiently for another gruelling three-hour session in the chair. The exhausting, privileged, utterly demanding job of Overseer.

It was a long time before Rixon noticed, engraved on the button-like green jewel, the single word : "YES."

Bill Spencer

THE LITERARY LINE-UP

Next month we have a break from serials by building the issue round a 20,000 word novelette by John Rackham (whose earlier novelette "Trial Run" was so well received in No. 101). "Blink" next month centres upon a known but particularly insidious invasion of Earth by visiting aliens. They were friendly, their scouts and ambassadors were welcomed, but somewhere behind the scenes things were not quite what they seemed.

The usual quota of short stories includes another Alan Barclay special, "Haircrack," and a first-class Philip E. High story, "The Jackson Killers." (His "Routine Exercise" in No. 103 looks like sweeping the board). Plus several others.

Ratings for stories in No. 101 were :

- | | | | | | | |
|------------------------|---|---|---|---|---|------------------|
| 1. Trial Run | - | - | - | - | - | John Rackham |
| 2. The Bell of Ethicon | - | - | - | - | - | Colin Kapp |
| 3. When In Doubt | - | - | - | - | - | Larry Maddock |
| 4. Greenie Gunner | - | - | - | - | - | Kenneth Bulmer |
| 5. Reason | - | - | - | - | - | Robert J. Tilley |

The urge to get into space will be an "all-consuming fire for many men—but how old must one grow before desire dies ?

TIME OF ARRIVAL

by DAVID ROME

He had a typewriter, a shirt and a pair of trousers, and he lived in one of the shanty places on Black Beach. An oldish man, long-haired and pale, with paper-thin eyes that were squinted from too much time in deep space.

"Weigh yourself down, boy," he used to say to me, when I'd come round. "You've shipped y'self this far, now stick." And he'd touch the pressure bursts in his face, where the blood veins were black. "Damn rupjared face is what it'll give you."

"It's okay, Mister Fakkel," I'd say. "You look dandy-fine, honest you do." And I'd trace the tiny whirls and twists of the broken blood vessels with my fingertips, and I'd swear to God, silently, that one day I'd be doing the same to my own face.

"Listen," he'd say. "Space is hell."

I would say nothing.

"I learn to write in space, boy. I see men go—*phff*—like that. I see 'em die a thousand ways. I write about it. I talk. You got to get it out of you."

Then he'd say, "How old're you, boy?"

"Eighteen," I told him once.

"A pig's eye you are," he said. "You were my son, I'd have you back at school."

"School is hell," I said, very mannish.

He was on his haunches, squatting like he used to, and he rocked himself back and forward, very slowly. One of his fingers was tracing a figure in the sand—a woman; gold hair flying in a magic wind. "You get y'self a girl," he said. He held a hand up, fingers curled, straightening them one by one to underline his points. "A wife, a home, a kid, a job, a car. Get those, and you get y'self a life. You keep away from space, boy. Space is hell."

I stood up taller, arms akimbo. "When the Mars ship comes," I said, "I'm going, Mister Fakkel."

"Do I give a damn?" he said. "Do I give a damn?"

He wasn't tall. When he got off his haunches he was an inch under my height. He was thin now, but his bones were big, and you could see the wide strength he'd once had in his shoulders.

"Johnny," he said, "you comin' down here tomorrow?"

"Maybe," I said. "Or maybe the Mars ship will come?"

There was a steamy sun that day, and it was shining in his eyes. I was walking off up the beach, and when I turned he was standing there still, one hand shading his eyes, watching me go. The beach was deserted and there was a breeze flapping in his white shirt. I waved, but he didn't wave back.

Paxter had a big face, and he pushed it close to mine when I got back to the hotel. "When d'you pay my bill?" he said.

"Tomorrow," I said.

He was a Venusian, orange eyes glowing. "Why d'you get no job?" he said. "Boys like you need to work." His grey hands polished glasses.

"The Mars ship is coming tomorrow," I said.

He looked at me, shaking his head. "Mars ship tomorrow, tomorrow. Perhaps tomorrow I put you out."

I was halfway up the stairs. "Okay, Mister Paxter. Fine, Mister Paxter." I got to my room and closed the door behind me. The blinds were open and there was light in the room. I sat on the bed and pulled out my transit bag. I opened it and put it on the bed. Then I opened the drawers and the

wardrobe and took my clothes out and folded them and put them into the bag. I took off my shirt and trousers and underclothes. I put the underclothes in the bag and got back into my shirt and trousers.

When I came downstairs Paxter said, "Where you going, boy?"

I put the bag on his counter. "You keep that for me," I said. "Tonight I'll come back to collect it."

"The Mars ship?" he said.

I touched my chest with a fist. "I feel it in here, Mister Paxter. Tonight it's coming. Tonight or tomorrow."

He put my bag under the counter.

I walked out into the street and I could feel the wind coming off the sea. When I looked toward the beach I saw Mister Fakkel coming down the walkway, too-long arms dangling foolishly as he walked, so I turned in the other direction because I didn't want to hear him cursing me.

I walked through the afternoon and into the darkness, and when the city lights came alive I was at the Port, staring up at the night sky, as though desire could draw the Mars ship down through the clouds. When it didn't come I walked down to the eating-place and had a cup of coffee.

Mister Fakkel came in.

"Johnny," he said. "I been looking for you."

"Don't curse at me, please, Mister Fakkel," I said.

He sat down beside me and ordered coffee. "I don't want to curse at you," he said. "I'm just giving you advice."

I was drinking my coffee, watching him over the rim of the cup. "How long did you spend in space?" I said.

He said slowly, "Thirty years."

"Hell," I said. "A lifetime."

"I've seen 'em last fifty, boy." He leaned forward on his elbows, eyes shadowed. "It's a sickness. A craving. Let space get a hold on you, and you're finished."

His coffee was put in front of him.

"I've got that craving," I said.

He didn't say anything. He drank his coffee slowly, and from where I was sitting I could see the slight tremble, tremble, of his hand. When he emptied his cup and put it into its saucer, the cup wouldn't stay still. It was trembling like his hand. I stared at it, not understanding. Then it began to

rattle and the cups around us began to rattle, and above it all there was rising thunder that shook the room.

Mister Fakkel was on his feet, and his hands were up high, touching his face. "It's here," he was saying. "It's here, boy. It's here."

I ran to the doorway.

It fell out of the night sky on a pillar of fire. Hull cherry red. Steam spreading white like a cloud. It touched. Quivered. Steadied. The thunder was gone.

The Mars ship had come.

It stood amid bustle, spotlights bright on its cooling hull. We stepped out of the darkness and saw it, and Mister Fakkel said, "Beautiful, beautiful. Johnny, she's beautiful."

I said, "She is, Mister Fakkel." I ran to the criss-cross fence and looked at her, and there was no one but me, and the ship was out in space, the whirling stars like bright silk around her.

Mister Fakkel took hold of my arm.

"Johnny—"

I drew away from him. We were under the lights and there were people watching us. I could feel the blood rushing hot to my face.

"Leave me be, Mister Fakkel," I said.

"Johnny," he said.

He said the name as though I was his son. and suddenly I hated him for it. I turned away, and I was only half a man because I could feel the quick tears stinging my eyes. I left him there at the fence and ran through the crowd, and when I looked again, I couldn't see him any more.

"You want a job?" they said.

"Yes," I said.

"Name here. Age here. You over sixteen, kid?"

"Yes."

"Bags?"

"Got to get them."

"Make it quick. Lift-off in thirty minutes."

I ran. Out of the Port, down past the eating-place. I stumbled into the hotel. There were men drinking and the big Venusian was behind his counter.

The counter was crowded. I tried to push through the crowd, and a Betelgeusian got me by the collar and spoke

a word at me in his own tongue. I struggled in his grip. Mister Paxter saw me then, and his big voice boomed.

"Hey, let him through. He's got my money."

The Betelgeusian grinned and let me go. I ran forward and hands got under my elbows and lifted me. When I got to the counter I was stumbling and I fell forward and struck my face on the edge of the counter. My nose began to bleed.

"My bag, please, Mister Paxter . . ."

He looked at me.

"Bag hell. Where's my money?"

"I've got a job."

"Where's my money?"

I wiped blood from my face. "I'll send it."

The Venusian shook his head.

"Please, Mister Paxter," I said.

"Money," he said.

"I've got to have my bag." My hands were gripping the edge of the counter, knuckles white. "You know the rule, Mister Paxter. They won't take me without a bag. I've got to have my identity papers. I've got to have my clothes."

"Go to hell," he said.

He was big and his fists were hard and scarred from bar fights. But I got him by the coat and pulled him forward.

"My bag, you damn Vus!"

His orange eyes flashed. He got me by the wrists and broke my grip. Then he had me by the throat and was lifting me, and men were laughing and hoisting me on to the counter. I stood half-crouched and the Venusian was looking up at me and grinning. When I kicked him in the face the grey blood came out of his mouth.

He got me by the legs then, bellowing with rage. I fell, striking out at him. He got my arm behind my back and his knee in the small of my back, forcing me forward.

"You cool off! You cool off, damn you, boy!"

I struck out at him again. He threw me forward. The heavy door of the wine-room was open, and I went through it and fell. He closed the door behind me and I was in darkness. I heard the lock click.

There was silence.

I stood up carefully and wiped my face. I felt around me in the darkness and my fingers touched the cool, glass shapes

of wine bottles. I shuffled to the door and pressed my hands flat against it, turning my face so that my mouth was close to the light slit that edged one side of the door.

"Mister Paxter," I said. "The ship leaves in twenty minutes."

Rattle of glasses. Hum of voices.

"I'll send what I owe. Double what I owe."

A clock ticking somewhere out there.

I stretched out a hand and touched a bottle. My eyes had widened now and I could see the heavy bulge of it in the darkness. I put my mouth close to the edge of light again.

"You let me out of here, Mister Paxter. Or by God, I'll smash every bottle in the place."

There was a silence. I let the bottle fall.

A smash of glass and a burst of laughter from outside. I dropped another bottle, and another. I swept my arm along one shelf and the bottles fell and smashed, and the laughter outside swelled.

The Venusian flung the door open.

He had a piece of wood like a club in his fist, and his eyes were blazing. I ducked low and ran at him. My head caught him in the chest and he swung at me and missed. He stumbled backward and hit the counter, and when I sprang past him he tried to get my legs. But I was quick and was over. Hands took hold of me. I shook myself free. The Betelgeusian lunged for me, but I ducked aside and was clear then. They were behind me and the doorway was ahead.

I ran, then walked. I had to have clothes, and a bag. My footsteps echoed on the pavement. I looked toward the Port, and the ship was tiny up there, bright like a needle under the lights. I began to run again, crossing the road.

Running toward the beach.

Space was a craving inside me, and the time was almost gone. My feet danced down steps, touched the sand. The sand was heavier going, and I could feel the breath beginning to burn in my throat. I bent quickly and kicked off my shoes. The sea was sweeping in and whispering along the black line of the shore. Mister Fakkell's place was ahead. My bare feet pounded, stumbled, pounded. I saw the dark glint of the tin roof and smelt the smell of the place. It was a smell of fish and age and falling-apart, and now, like a picture against a

dark wall, I could see the brightness of the single window, lit by the oil lamp he always used.

When I got round the other side, the door was open and the light was streaming out across the black sand. I stopped, I stood in the doorway and said, "Mister Fakkel?"

The sea broke along the shore and the sound ran up to me, thundering.

"Hey, Mister Fakkel. Mister Fakkel."

I stepped inside.

There was a newspaper spread across the table, and there was a white wooden chair pushed back from it. The oil lamp was standing on the table, and Mister Fakkel's ancient typewriter was beside it. There was a sheet of paper rolled into it.

I took it out. And read it.

'John,' he had written. '*We both have the craving . . .*'

That was all.

I rolled the paper into a tight ball and walked out of the place. I stood on the beach and let the ball of paper blow out of my hand and tumble away on the wind. I stood for a long time.

When I looked at the Port again, the Mars ship had gone.

David Rome

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REVIEW

"If there has been a better science fiction novel in the past few years this reviewer has not seen it. It ("Venus Plus X") is so good that it cannot be praised in detail because the detail deserves to come to you as Sturgeon intends it, *seriatim*. This one you've got to read for yourself and don't let anyone spoil it for you."

—Frederik Pohl, January 1961, *IF*

VENUS PLUS X

by THEODORE STURGEON

Conclusion

Foreword

Awareness slowly returns to CHARLIE JOHNS' conscious mind as he lies trapped in a pliable translucent silver-grey cocoon—somewhere. Frantically he thinks back over his former life to establish identity—to his childhood, his Mother, his girl friends and school days, but his last recollection is of climbing the stairs to his bedroom. Apparently he never reached the doorway of his room.

In desperation he pushes against the side of the cocoon and it splits asunder to pitch him into a strange room with an even stranger person waiting for him. Neither understand the other's speech but Charlie is shown that he is in a world far different to that of the Earth he knew. A breathtaking world of alien architecture and fashion, populated, it seems, only by males.

Later he meets four other people and is placed under a machine which teaches him their language. He finds that he is in a place called Ledom, still on Earth, but far removed from his own civilisation. His mentors are PHILOS, whom he first met, SEACE, chief of Science One, GROCID and MIELWIS, heads of Medical One, and NASIVE. Despite his questioning he cannot find out exactly where he is in the future, how far away from his own time; but he is promised a return to his original life if he will stay for a while among the Ledom, study their way of life and give them an unbiassed report on their 'superman' way of living. Charlie eventually agrees.

While dressing suitably in Ledomese attire Charlie discovers that the inhabitants are neither male or female.

Later he discovers that their anatomical structure has been slightly altered so that they are both sexes combined. They are, in fact, the next biological advancement in the development of humankind.

Charlie goes to find Seace in the Science One and accidentally discovers the machine which brought him to Ledom. He memorises the combination which could return him to his own time but before he can do anything further Seace arrives. His education into the technical advances of the Ledom continues.

Throughout the narrative of Charlie Johns' adventures on Ledom are interspersed conversational pieces between two ordinary presentday American families—the Smith's and the Raile's—against whose speculations and philosophies the future civilisation of the Ledom are portrayed.



Philos had said it well : it was like a letter. " Reading " it, however, was unlike anything he had ever experienced consciously before. He had pressed the stud, which emitted a soft *chuck* ! and then there was a passage of time which was measureless, in that the mental clock which tells a man, unthinking, whether a bell rang five seconds, five minutes, or five hours ago, was momentarily stopped or suspended. It could not have been very long, however, and there was, in any ordinary sense, no loss of awareness, for when the stud went *chuck* ! again, Philos still stood over him, smiling. But he now felt precisely as if, at that very moment, he had put down, after an absorbed reading, a long and interesting letter from a friend.

He said, startled into English, " Well, for *God's* sake !"

Charlie Johns, (the " letter " had begun) you cannot be objective about this discussion. But try. Please try.

You cannot be objective about it because you have been indoctrinated, sermonized, drenched, imbued, inculcated and policed on the matter since first you wore blue booties. You come from a time and place in which the maleness of the male, and the femaleness of the female, and the importance of their difference, were matters of almost total preoccupation.

Begin, then, with this—and if you like, regard it as mainly a working hypothesis. Actually it is a truth, and if at the end it passes the tests of your own understanding, you will see that it is a truth. If you do not, the fault is not with you, but with your orientation :

There are more basic similarities than differences between men and women.

Read through an anatomy manual. A lung is a lung, a kidney a kidney in man or in woman. It may be that statistically, women's bone-structure is lighter, the head smaller, and so on and on ; yet it is not impossible that mankind had, for many thousands of years, bred for that. But aside from such conjectures, the variations permissible to what is called " normal " structure provide many examples of women who were taller, stronger, heavier-boned than most men, and men who were smaller, slighter, lighter than most women. Many men had larger pelvic openings than many women.

In the area of the secondary sexual characteristics, it is only statistically that we can note significant differences ; for many women had more body hair than many men ; many men had higher-pitched voices than many women. . . . I call again on your objectivity : suspend for a moment your conviction that the statistical majority is the norm, and examine the cases, in their vast numbers, which exist outside that probable fiction, that norm. And go on :

For even with the sex organs themselves, variations in development—and here, admittedly, we approach the pathological—have yielded countless cases of atrophied phalli, hypertrophied clitori, perforate rathes, detached labia . . . all, viewed *objectively*, reasonably subtle variations from the norm and capable of producing, on an initially male or female body, virtually identical urogenital triangles. It is not my intention to state that such a situation is or should be normal—at least, not after the fourth fetal month, though up to then it is not only

normal but universal—but only to bring out to you that its occurrence is easily within the limits of what has been, since prehistory, possible to nature.

Endocrinology demonstrates a number of interesting facts. Both male and female could produce male and female hormones, and did, and as a matter of fact, the preponderance of one over the other was a subtle matter indeed. Then if you throw that delicate balance out, the changes which could be brought about were drastic. In a few months you could produce a bearded and breastless lady and a man whose nipples, no longer an atrophied insigne of the very point I am making here, could be made to lactate.

These are gross and extreme examples purely for illustration. There have been many women athletes who could exceed in strength, speed and skill the vast majority of men, but who were nonetheless what you might call “real” women, and many men who could, say, design clothing—traditionally a woman’s specialty—far better than most women, yet who were what you might call “real” men. For when we get into what I might broadly term cultural differences between the sexes, the subtlety of sexual distinction begins to become apparent. What say the books :

Women have long hair. So have the Sikhs, whom some call the toughest breed of soldiers ever bred. So had the 18th-century cavaliers, and brocaded jackets and lace at throat and wrists as well. Women wear skirts. So does a kilted Scot, a Greek *evzone*, a Chinese, a Polynesian, none of whom could deserve the term “effeminate.”

An objective scan of human history proliferates these examples to numbers astronomical. From place to place, and in any place from time to time, the so-called “provinces” of male and female rise like the salinity of a tidal rivermouth, mingling, separating, ebbing and regrouping . . . before your first World War, cigarettes and wrist-watches were regarded as unquestionably female appurtenances ; twenty years later both were wholeheartedly adopted by the men. Europeans, especially central Europeans, were startled and very much amused to see American farmers milking cows and feeding chickens, for never in their lives had they seen that done by any but women.

So it is easily seen that the sexual insignes are nothing in themselves, for any of them, in another time and place, might belong to both sexes, the other sex, or neither. In other words, a skirt does not make make the social entity, woman. It takes a skirt plus a social attitude to do it.

But all through history, in virtually every culture and country there has indeed been a "woman's province" and a "man's province," and in most cases the differences between them have been exploited to fantastic, sometimes sickening extremes.

Why?

First of all, it is easy to state, and easy to dispose of, the theory that in a primitive, primarily hunting-and-fishing society, a weaker, slower-moving sex, occasionally heavy with child and forced frequently to pause to nurse her young, is not as well fitted to hunt and fight as the fleeter-footed, untrammelled, hard-muscled male. However, it may well be that the primitive woman was not that much smaller, slower, weaker than her mate. Perhaps the theory confuses cause and effect, and perhaps, if some other force had not insisted upon such a development, accepted it, even bred for it, the nonparous females might have hunted with the best of the men, while those men who happened to be slower, smaller, weaker, kept house with the pregnant and nursing women. And this has happened—not in the majority of cases, but many times nevertheless.

The difference existed—granted. But it was exploited. It was a difference which continued to exist long, long after there was any question of hunting or, for that matter, of nursing. Humanity has insisted upon it; made it an article of faith. Again:

Why?

It would seem that there *is* a force which widens and exploits this difference, and, isolated, it is a deplorable, even terrifying pressure.

For there is in mankind a deep and desperate necessity to feel superior. In any group there are some who genuinely are superior . . . but it is easy to see that within the parameters of any group, be it culture, club, nation, profession, only a few are really superior; the mass clearly, are not.

But it is the will of the mass that dictates the mores, initiated though changes may be by individuals or minorities; the individuals or minorities, more often than not, are cut down for their trouble. And if a unit of the mass wants to feel superior, it will find a way.

This terrible drive has found expression in many ways, through history—in slavery and genocide, xenophobia and snobbery, race prejudice and sex differentiation. Given a man who, among his fellows, has no real superiority, you are faced with a bedevilled madman who, if superiority is denied him, and he cannot learn one or earn one, will turn on something weaker than himself and *make it inferior*. The obvious, logical, handiest subject for this inexcusable indignity is his woman.

He could not do this to anyone he loved.

If, loving, he could not have insulted this close, so-little-different other half of himself, he could never have done it to his fellow man. Without this force in him, he could never have warred, nor persecuted, nor in pursuit of superiority lied, cheated, murdered and stolen. It may be that the necessity to feel superior is the source of his drive, and his warring and killing have brought him to mighty places; yet it is not unconceivable that without it he might have turned to conquering his environment and learning his own nature, rising very much higher and, in the process, earning life for himself instead of extinction.

And strangely enough, man always wanted to love. Right up to the end, it was idiomatic that one "loved" music, a colour, mathematics, a certain food—and aside from careless idiom, there were those who in the highest sense loved things beyond anything which even a fool would call sexual. "I could not love thee, dear, so much, loved I not honour more." "For God so loved the world, he gave his only begotten son . . ." Sexual love is love, certainly. But it is more precise to say that it is *loving*, in the same way we might say that justice is loving, and mercy is loving, forbearance, forgiveness, and, where it is not done to maximize the self, generosity.

Christianity was, at the outset, a love movement, as the slightest acquaintance with the New Testament clearly documents. What was not generally known until just before the end—so fiercely was all knowledge of primitive Christianity suppressed—was that it was a charitic religion—that is, a religion in which the congregation participated, in the hope of having a genuine religious experience, an experience later called theolepsy, or seized of God.

Many of the early Christians did achieve this state, and often; many more achieved it but seldom, and yet kept going back and

back seeking it. But once having experienced it, they were profoundly changed, inwardly gratified ; it was this intense experience, and its permanent effects, which made it possible for them to endure the most frightful hardships and tortures, to die gladly, to fear nothing.

Few dispassionate descriptions of their services—gatherings is a better term—survive, but the best accounts agree on a picture of people slipping away from fields, shops, even palaces, to be together in some hidden place—a mountain glade, a catacomb, anywhere where they might be uninterrupted. It is significant that rich and poor alike mingled at these gatherings : male and female. After eating together—genuinely, a love feast—and invoking the spirit, perhaps by song, and very likely by the dance, one or another might be seized by what they called the Spirit.

Perhaps he or she—and it might be either—would exhort and praise God, and perhaps the true charitic (that is, divinely gifted) expression would issue forth in what was called “speaking in tongues,” but these exhibitions, when genuine, were apparently not excessive nor frenetic ; there was often time for many to take their turn. And with a kiss of peace, they would separate and slip back to their places in the world until the next meeting.

The primitive Christians did not invent charitic religion, by any means ; nor did it cease with them. It recurs again and again throughout recorded history, and it takes many forms. Frequently they are orgiastic, Dionysic, like the worship of the Great Mother of the Gods, Cybele, which exerted an immense influence in Rome, Greece and the Orient a thousand years before Christ. Or chastity-based movements like the Cathars of the Middle ages, the Adamites, the Brethren of the Free Spirit, the Waldenses (who tried to bring a form of apostolic Christianity into the framework of the Roman church) and many, many others appear all through history. They have in common one element—the subjective, participant, ecstatic experience—and almost invariably the equality of women, and they are all love religions.

Without exception they were savagely persecuted.

It seems that there is a commanding element in the human makeup which regards loving as anathema, and will not suffer it to live.

Why ?

An objective examination of basic motivations (and Charlie ! I *know* you can't be objective ! but bear with this !) reveals the simple and terrible reason.

There are two direct channels into the unconscious mind Sex is one, religion is the other ; and in pre-Christian times, it was usual to express them together. The Judeo-Christian system put a stop to it, for a very understandable reason. *A charitic religion interposes nothing between the worshipper and his Divinity.* A suppliant, suffused with worship, speaking in tongues, his whole body in the throes of ecstatic dance, is not splitting doctrinal hairs nor begging intercession from temporal or literary authorities. As to his conduct between times, his guide is simple. He will seek to do that which will make it possible to repeat the experience. If he does what for him is right in this endeavour, he will repeat it ; if he is not able to repeat it, that alone is his total and complete punishment.

He is guiltless.

The only conceivable way to use the immense power of innate religiosity—the need to worship—for the acquisition of human power, is to place between worshipper and Divinity a guilt mechanism. The only way to achieve that is to organize and systematize worship, and the obvious way to bring this about is to monitor that other great striving of life—sex.

Homo sapiens is unique among species, extant and extinct, in having devised systems for the suppression of sex.

There are only three ways of dealing with sex. It may be gratified ; it may be repressed ; or it may be sublimated. The latter is, through history, often an ideal and frequently a success, but it is *always* an instability. Simple, day-by-day gratification, as in what is called the Golden Age of Greece, where they instituted three classes of women : wives, *hetaerae* and prostitutes, and at the same time idealized homosexuality, may be barbaric and immoral by many standards, but produces a surprising degree of sanity.

A careful look, on the other hand, at the Middle ages, makes the mind reel ; it is like opening a window on a vast insane asylum, as broad as the world and as long as a thousand years ; here is the product of repression. Here are the scourging manias, when people by the thousands flogged themselves and each other from town to town, seeking penance from excesses of guilt ; here is the mystic Suso, in the fourteenth century, who had made for him an undergarment for his loins, bearing a

hundred and fifty brass nails filed sharp ; and lest he try to ease himself in his sleep, a leather harness to hold his wrists firmly against his neck ; and further, lest he try to relieve himself of the lice and fleas which plagued him, he put on leather gloves studded with sharp nails which would tear his flesh wherever he touched it ; and touch it he did, and when the wounds healed he tore them open again. He lay upon a discarded wooden door with a nail-studded cross against his back, and in forty years he never took a bath. Here are saints licking out lepers' sores ; here is the Inquisition.

All this in the name of love.

How could such a thing so change ?

The examination of one sequence clearly shows how. Take the suppression of the Agape, the " love feast," which seems to have been a universal and necessary appurtenance of primitive Christianity. It can be unearthed by records of edicts against this and that practice, and it is significant that the elimination of a rite so important to worship seems to have taken between three and four hundred years to accomplish, and was done by a gradualism of astonishing skill and efficiency.

First of all, the Eucharistic, the symbolic ritual of the body and blood of Christ, was introduced into the Agape. Next, we find the Agape better organized ; there is now a bishop, without whom the Agape may not be held, for he must bless the food. A little later the bishop is traditionally kept standing through the meal, which of course keeps him separate, and above the others. After that, the kiss of peace is altered ; instead of kissing one another, all the participants kiss the officiating priest, and later, they all kiss a piece of wood which is handed around and passed to the priest. And then, of course, the kiss is done away with altogether.

In the year 363, the Council of Laodicae is able to establish the Eucharist as a major ritual by itself, by forbidding the Agape within a church, thus separating them. For many years the Agape was held outside the church door, but by 692 (the Trullan Council) it was possible to forbid it altogether, under the penalty of excommunication.

The Renaissance cured many of the forms of insanity, but not the insanity itself. When temporal and ecclesiastical authorities still maintained control over basically sexual matters—morals, and marriage, for example (although it was

very late in the game when the Church actually performed marriage ; marriages in England at the time of Shakespeare were by private contract valid, and by Church blessing licit) guilt was still rife, guilt was still the filter between a man and his God. Love was still equated with passion and passion with sin, so that at one point it was held to be sinful for a man to love his wife with passion.

Pleasure, the outer edge of ecstasy, was in the dour days of Protestantism, considered sinful in itself, wherever gained ; Rome held specifically that any or all sexual pleasure was sinful. And for all this capped volcano produced in terms of bridges and houses, factories and bombs, it gouted from its riven sides a frightful harvest of neurosis. And even where a nation officially discarded the church, the same repressive techniques remained, the same preoccupation with doctrine, filtered through the same mesh of guilt.

So sex and religion, the real meaning of human existence, ceased to be meaning and became means ; the unbridgeable hostility between the final combatants was the proof of the identity of their aim—the total domination, for the ultimate satisfaction of the will to superiority, of all human minds.



Herb Raile goes in to say goodnight to the kids. He kneels on the floor by Karen's bed. Davy watches. Herb cradles Karen in his arms, tickles her tummy until she squeals, kisses the side of her kneck and bites the lobe of her ear. Davy watches, big-eyed. Herb covers Karen's head with the blanket, quickly ducks out of sight so she can't see him when he pulls the blanket down. She searches, finds him, giggles wildly. He kisses her again. smooths the blanket over her, whispers "Your daddy *loves* you," says goodnight and turns to Davy, who watches, solemn.

Herb reaches out his right hand. Davy takes it. Herb shakes it. "Good night, old man," he says. He releases the hand. "Good night, Dad," says Davy, not looking at Herb.

Herb turns out the light and leaves. Davy gets out of bed, wads up his pillow, crosses the room and whangs the pillow down as hard as he can on Karen's face.

"I can't," says Herb quite a while later, after the tears are dried and the recriminations done with, "understand whatever made him do that."



We Ledom renounce the past.

We Ledom (continued the cerebrostyle "letter") leave the past forever, and all products of the past except for naked and essential humanity.

The special circumstances of our birth make this possible. We come from a nameless mountain and as a species we are unique ; as all species, we are transient. Our transience is our central devotion. Transience is passage, is dynamism, is movement, is change, is evolution, is mutation, is life.

The special circumstance of our birth include the blessed fact that in the germ-plasm is no indoctrination. Had homo sap. had the sense (it had the power) it could have shut off all its poisons, vanquished all its dangers, by raising one clean new generation. Had homo sap. had the desire (it had both sense and power enough) to establish a charitic religion and a culture to harmonize with it, it would in time have had its clean generations.

Homo sap. claimed to be searching for a formula to end its woes. Here is the formula : a charitic religion and a culture to go with it. The Apostles of Jesus found it. Before them the Greeks found it ; before them, the Minoans. Since then the Cathars found it, the Quakers, the Angel Dancers. Throughout the Orient and in Africa it has been found repeatedly . . . and each time it has failed to move any but those it touched directly.

Men—or at least, the men who moved men—always found that the charitic is intolerant of doctrine, neither wanting it nor needing it. But without doctrine—presbyter, interpreter, officiator—the men who move men are powerless—that is to say, not superior. There is nothing to gain in charitism.

Except, of course, the knowledge of the soul ; and everlasting life.

Father-dominated people who form father-dominated cultures have father-religions : a male deity, an authoritative scripture, a strong central government, an intolerance for inquiry and research, a repressive sexual attitude, a deep conservatism (for one does not change what Father built), a rigid demarcation in dress and conduct between the sexes, and a profound horror of homosexuality.

Mother-dominated people who form mother-dominated cultures have mother-religions : a female deity served by priestesses, a liberal government—one which feeds the masses and succours the helpless—a great tolerance for experimental thought, a permissive attitude toward sex, a hazy boundary between the insignies of the sexes, and a dread of incest.

The father-dominated culture seeks always to impose itself upon others. The other does not. So it is the first, the patrist culture which tends to establish itself in the main stream, the matrist which rises within it, occasionally revolts, more often is killed. They are not stages of evolution, but phases marking swings of the pendulum.

The patrists poison themselves. The matrists tend to decay, which is merely another kind of poison. Occasionally one will meet a person who has been equally influenced by his mother and his father, and emulates the best of both. Usually, however, people fall into one category or the other ; this is a slippery fence on which to walk. . . .

Except for the Ledom.

We are liberal in art and in technological research, in expression of all kinds. We are immovably conservative in certain areas : our conviction, each of us, never to lose the skills of the hand and of the land. We are raising children who will emulate neither mother-images nor father-images, but parents ; and our deity is the Child.

We renounce and forego all products of the past but ourselves, though we know there is much there that is beautiful ; that is the price we pay for quarantine and health ; that is the wall we put between ourselves and the dead hand. This is the only taboo, restriction—and the only demand we have from those who bore us.

For, like *homo sap.*, we were born of earth and of the creatures of earth ; we were born of a race of half-beasts, half-savages ; *homo sap.* birthed us. Like *homo sap.* we are denied the names of those from whom we sprung, though, like men, we have much evidence of the probabilities. Our human parents built us a nest, and cared for us until we were fledged, but would not let us know them, because, unlike most men, they knew themselves and therefore would not be worshipped. And no one but themselves, they and the mothers, knew of us, that we were here, that we were something new on the face of earth.

They would not betray us to homo sap., for we were different and like all pack, herd, hive animals, homo sap. believes in the darkest part of the heart that whatever is different is by definition dangerous, and should be exterminated. Especially if it is similar in any important way (oh how horrible the gorilla, how contemptible the baboon) and most especially if in some way it might be superior, possessing techniques and devices surpassing their own (remember the Sputnik Reaction, Charlie ?) but with absolute and deadly certainty if their sex activities fall outside certain arbitrary limits ; for this is the key to all unreason, from outrage to envy. In a cannibal society it is immoral not to eat human flesh.

The stud went *chuck* ! and Charlie Johns found himself looking up into Philos' sardonic smiling eyes.

He said, startled into English, "Well, for *God's* sake !"



"No bowling tonight, honey ?"

"No, honey. I called Tillie Smith and begged off and she was glad and I was glad."

"You gals tiffing ?"

"Oh, no ! Far from it. It's just that . . . well, Tillie's very touchy these days. She knows it and she knows I know it. She'd much rather skip bowling altogether than get huffy with me and she knows she would if she did so she won't."

"Sounds like the old prostate acting up again !"

"Herb, you're gossiping. Besides, she hasn't got a prostate."

"She hasn't got Smitty's prostate, so that's the trouble."

"Oh, I guess so, Herb, you old scandal-monger you."

"Sex . . . it's like pants."

"Wh . . . ?—oh dear, there you go getting philosophical again. All right—get it off your chest."

"Not philosophical. More like what do you call making fables ?"

"Fabulous."

"So I'm fabulous. Sex is like pants. All right. I go from here down Begonia to the Avenue and walk two blocks and get cigarettes and walk back, pass a lot of people, nobody notices."

"Everybody notices, you great big handsome—"

"No wait—wait. Nobody really notices. You come along and ask all those people I passed, did they see me. Some say

yes ; most don't know. You get the ones said yes, ask 'em what type pants I was wearing. Now actually they could be chinos or dungarees or from the tux with black silk stripes or gabardine."

" This isn't about sex."

" Wait, wait. Now suppose I leave here to go to the drug store I don't wear any pants."

" Any pants ?"

" Uh-huh. Now who notices ?"

" You wouldn't get as far as the avenue. Don't you dare try it, right past the Palmers'."

" Everybody notices—right ! So—sex. Somebody get enough, it hardly even matters what kind, as long as it's not too funny-looking, he goes about his business, don't think about it, don't bother anyone else. But when has none, none at all, boy ! From here to there, it's all he can think about, but *all*, and likewise he bothers everyone in sight. Tillie."

" Oh, *that* wouldn't bother Tillie."

" Not what I mean. I mean, that's the way with Tillie now. What's bothering her, you can't go bowling she's too jumpy."

" I think you're right, you know that, about sex is like pants. Only don't go talking it around, people will say you said Tillie doesn't wear pants." Jeanette laughs shrilly.

" What a thought. Any old pants."

" Long as it covers the situation. Yuk. Something old, something new, something borrowed, something blue."

" Yuk yourself, and don't you dare try it."



Outside in the hall they met Mielwis, who said, " How are you coming along, Charlie Johns ?"

" I'm there," said Charlie warmly. " I think you're the most remarkable thing ever to hit this old planet, you Ledom. It's enough to make a fellow really religious, the business of a mutation like you coming along just when the rest of us were going up in smoke."

" You approve of us, then."

" Once you get used to the idea . . . well, I should say I do ! God, it's a pity there weren't a few of you around—ah—preaching or something. I mean it."

Mielwis and Philos exchanged a glance. " No," said Philos, as it were across Charlie and out of his range, " not yet."

"Will it be soon?"

"I think we'll go out to the Edge," said Philos. "Just Charlie and I."

"Why?" Mielwis asked.

Philos smiled, and the dark lights in his eyes flashed. "It takes a while to walk back."

Mielwis then smiled too, and nodded. "I'm glad you think well of us Charlie Johns," he said. "I hope you always do."

"What else?" said Charlie, as he and Philos turned away down the corridor. They dropped down a shaft, and in the main court, Charlie demanded, "Now what was that all about?"

"There's still something you don't know," said Philos, waving at a child, who twinkled back at him.

"Something you're going to show me out at the Edge?"

"What I said to Mielwis," replied Philos, obviously not answering the question, "was, in effect, that after I tell you the rest of it, a good long walk might help you shake it down."

"Is it that hard to take?" laughed Charlie.

Philos did not laugh. "It's that hard to take."

So Charlie stopped laughing, and they walked out of the Medical One and struck off across the open land in a direction new to Charlie.

"I miss the dark," said Charlie after a while, looking up at the silver sky. "The stars . . . what about astronomy, Philos, and geophysics, and things like that, that need a little more scope than olive groves and farm fields?"

"There's plenty of that in the cerebrostyle files, in case it gets important suddenly. Meanwhile," said Philos, "it'll wait."

"For what?"

"For a livable world."

"How long will that be?"

Philos shrugged. "Nobody can tell yet. Seace thinks we should put up a satellite every hundred years or so to check."

"Every hundred years or so? For God's sake, Philos—how long are you going to stay bottled up here?"

"As long as it takes. Look, Charlie, mankind has spent some thousands of years looking outward. There's a great deal more in the files about the composition of white dwarf stars than there is about the structure of the earth under our feet. It's a good analogy; we need to balance things up a bit by spending a while looking inward instead of outward."

"As one of your writers—Wylie, I think—said, we have to get away from the examination of the *object* and get to know the *subject*."

"And meanwhile you're at a standstill!" cried Charlie, and waved an indicative hand at a distant Ledom patiently weeding with a hoe. "What are you going to do—stand still for ten thousand years?"

"What is ten thousand years," asked Philos equably, "in the history of a *race*?"

They walked in silence for a time over the rolling land, until Charlie gave a small, almost embarrassed laugh and said: "I guess I'm not used to thinking that big. . . . Listen, I'm still hazy about just how the Ledom got started."

"I know," said Philos reflectively. "Well, with the first two, word was passed to a number of very intelligent and far-thinking people. As I told you in the 'style, they made it a point to conceal their identities from us, and you can be sure they were ten times as cautious with the rest of the world. Homo sap. wouldn't take kindly to the idea of being supplanted; am I right?"

"I'm afraid you are."

"Even if the new species wasn't in direct competition," nodded Philos. "Well then: though we don't have any direct knowledge as to who they were, it's clear that they must have had very astute advice in a dozen different fields. They developed the first cerebrostyle, for example, and did most of the groundwork on the A-field, though I don't think the first field was actually generated until we were on our own."

"Whether they worked on us—for us—until they died, or brought the work to a certain point and then sealed us off, and went back to wherever they came from, I couldn't say. I only know for certain that there was a small colony of young Ledom in a large mountain cave which opened on to an otherwise inaccessible valley. The Ledom never set foot in that valley until the A-field was developed and it could be roofed over."

"Then the air wasn't radioactive, or anything like that!"

"No, it wasn't."

"Then the Ledom actually coexisted with homo sap. for a while!"

"Yes indeed. The only way they might have been discovered would be from the air. Of course, once the A-field was ready, that was no longer a problem."

"What does it look like from the air?"

"I'm told," said Philos, "it looks like more mountains."

"Philos, you Ledom all resemble one another pretty much. Are—were you all one family?"

"Yes and no. As I understand it, there were two of us at first, unrelated. The rest are descended from those."

Charlie thought a moment, then decided not to ask the question which was in his mind. Instead he asked, "Could anyone leave here?"

"No one would want to, would they?"

"But—*could* they?"

"I suppose so," said Philos, in a mildly irritated tone. Charlie wondered if this was a conditioning or some such. It would be logical. "How long have the Ledom been here?"

"I'll answer that," said Philos, "but not now."

A little taken aback, Charlie trudged along for a while in silence. Then he asked, "Are there any more Ledom settlements like this?"

"None." Philos seemed to becoming more and more laconic.

"And isn't there anyone out there at all?"

"We presume not."

"Presume? Don't you know?" When Philos would not respond, Charlie asked him point-blank, "Is homo-sap, really extinct?"

"Inescapably," said Philos; and he had to be satisfied with that.

They had reached the edge of the valley, and were climbing foothills. The going was more difficult, but Philos seemed to want to go faster, seemed to be driven by something. Charlie noticed how he kept examining the rocks about them, kept looking back toward the looming Ones.

"You looking for something?"

"Just a place to sit down," said Philos. They threaded their way between huge boulders and came at last to a steep slope, part solid rock, part talus. Philos glanced again toward the Ones—they were invisible from here—and said in a strange taut voice, "Sit down."

Charlie, realizing that he had for many minutes been building up to something large, something unexpected, found himself a flat rock and crouched on it.

"This is where I . . . lost . . . my mate, my Froure," said Philos.

Recalling that he had promised Nasive that he would not admit previous knowledge, Charlie, with no difficulty at all, put a sympathetic expression on his face and said nothing.

"It was a long time ago," said Philos. "I had just been given the history assignment. The overall idea was to see what would happen if one of us was drenched with it ; if it was as poisonous as some people feared. And by some people, I mean some of the people who worked with us in the First Cave.

"They believed pretty strongly that we should cut all ties with homo sap., who seemed to have fumbled the ball pretty badly, and try not to emulate him in any way, even unconsciously. This would cost us his art, his literature, and a great deal of what was good in his evaluations ; but at the same time they did not want us denied his pure sciences—you mentioned astronomy yourself—and some of the developmental data. It pays, you know, sometimes, to know what mistakes to avoid. It not only saves trouble ; in a moral sense it makes some of the most appalling errors worth while, good for something. So . . . try it on the dog first," he said, with a bitter little smile.

"I'd got about as far along as you are in the study of the Ledom and of homo sap., though in a good deal more detail. Froure and I had been married only a short while, and I'd had to spend a lot of time alone. I thought it would be nice if Froure and I took a long slow walk, just to talk, to be together. We were both pregnant. . . . We sat down here and the . . . the . . ." Philos swallowed and began over. "The ground opened up. That's the only way I can say it. Froure went right . . . down. I jumped to—"

"I'm sorry," said Charlie uselessly.

"Four days later they dug me out. They never found Froure. I lost both my babies. The only ones I'll ever have, I guess."

"But surely you could—"

Philos interrupted the warm suggestion. "But surely I wouldn't—" he said, pleasantly mocking. Seriously, then, "I like you, Charlie Johns, and I trust you. I'd like to show you why I can't possibly marry, but you'll have to promise me your absolute confidence."

"Certainly !"

Philos regarded him solemnly for a long moment, then touched his hands together. The mirror-field sprang into existence. He placed the ring, with the field still operating, on

the ground, stepped back a yard, and gave a sharp pull at the edge of a flat rock. It tilted, discovering a dim hole or tunnel-mouth. The mirror, frameless and perfect, reflecting against the big boulder, would offer perfect camouflage to the hole behind it, should anyone approach from the Ones. Philos dropped into the hole, beckoned to Charlie, and passed out of sight.

Thunderstruck, Charlie followed.



Thirty people in the living room is a bit of a squeeze, but it's all friendly and informal and people don't mind sprawling around on the floor. The minister is a good man. He's a good man, thinks Herb, in any old way you want to use the words. When this Rev. Bill Flester was a chaplain in the army, he'd bet the church people said that and the brass and the GI's too. Flester has clear eyes and very good teeth, and iron-grey, crew-cut hair and a young ruddy face. His clothes are sober but not funereal, and his narrow tie and narrow lapels, like his words, speak their language. He has begun by stating a thesis like a text for a sermon, but it is not a Biblical text ; it is a working phrase like what you'd run across on Madison Avenue or any place ; it is " There's always a way, if you can only think of it."

The neighbours listen raptly. Jeanette watches the teeth. Tillie Smith watches the shoulders, which are broad, and the iron-grey crew-cut. Smitty, folded up on the end of a coffee table, leans forward and with his thumb and forefinger pulls his lower lip out so you can see clear to the floor of his mouth in front of his teeth, which is the Smith semaphore for " This guy has something here."

" Now our Jewish friends," Flester is saying, with a filtered approval, " have built themselves that very pretty little temple down on Forsythia Drive. and over on the other side of the development our Catholic buddies have themselves a nice little brick chapel. Now I've done a little reading and a lot of legwork, and I find there are twenty-two different Protestant churches within ten miles of here ; people from this development go to eighteen different ones, and we have at least fifteen represented right here in this room. Now nobody's going to build fifteen or twenty or twenty-two different kinds of Protestant churches here. Now the school people know what to do

about small scattered outlets, and so do the grocery people. They centralize.

"It just seems to me we ought to take a leaf from their book. A church has to look to efficiency, and product appeal, and rising costs just like any other operation. In a new situation, you find new ways to do business, like the idea of driving your car into a bank, like this shopping by television they talk about in the Sunday papers. We're all Protestants and we all want to go to church right here in the neighbourhood. The only thing in our way is a question of doctrine. There are a lot of folks take their doctrine pretty seriously, and let's be frank, there have been quarrels about it.

"A lot has been done with the idea of uniting churches. You give a point, I give a point, we get together. But a lot of folks figure they have got together by losing something. That's the way it makes some folks feel: a compromise is when everybody loses something. We don't want that here.

"I think with all respect that some folks have hold of the wrong end of the stick. There must be a way to join together where nobody loses and everybody gains. There always *is* a way if you can only think of it.

"Now what I think, and I take no credit for it because any of you people would come up with the same answer if you had yourself involved in it like I have, I think we ought to get the people in from all the different churches, on the top level; what you would call a management group, an executive group, and I think we ought to kick around the idea of a little church for all of us. But instead of fighting about which brand to stock, let's load the shelves with all the brands, you know, top quality goods from all over. You go in there to God's supermarket with a need to fill, and it's there for you, and you wheel over and take it off the shelf.

"Now just for an example of what I mean, if one of you ladies has been loyal to Del Monte brand all your life, I wouldn't want you to hide it like a secret, I wouldn't want to hire a boy to go to work and rip off all the labels, I wouldn't want you stop using it or stop telling all your girl-friends you think that's best. I just want you to have it and use it and be happy with it. And there's going to be no quarrel between you and the market, or between you and another customer, if she wants some other brand, because that brand is going to be right there on the same kind of shelf under good lighting and a fair display.

"If we can put this proposition to—heh—management from all over, like you might say the distributors, I don't think they will fight the idea of more distribution without disturbing consumer loyalty. I think they'll get just as enthusiastic about packaging and point-of-sale merchandizing as the store management will. Here'll be management dedicated to 'service' in a new way.

"No one needs to go without anything he really needs—that's the American way. If you want your kiddies baptized by immersion, we'll have a font or pool big enough. If you want candles on the altar, fine ; a Sunday is big enough to have services with them and without them. The candlesticks can be telescopic. Pictures and decorations ? Put them in slots and hinges so they can be changed or slid out of sight or anything you like.

"I won't go into any more detail about it ; it's *your* church and we'll set it up your way. Long as we're guided by the idea of service—and all that means is that we're not fixing to offend anybody. There are more similar ways of loving your God than different ways of loving your God, and it's high time and past time we moved along with the main currents of the American system and let our churches service us with self-service of the best kind, with plenty of parking space and a decent playground for the kiddies.

Everybody applauds."



Philos set his shoulder against the slab and it swung up and shut. It was totally dark for a moment, and then there was a scrabbling sound and Philos unearthed a lump of coldly glowing material and set it in a cleft.

"There's one more important thing for you to learn about Ledom, and in an ugly sort of way," said Philos, "you couldn't have been given a better way to learn it. Mielwis himself hasn't the slightest notion how good. Put this on."

From some hidden hollow in the rock he drew a cloak ; thick cobweb might describe such a material. He got a similar one and enveloped himself in the folds. Charlie, speechless, followed suit, while Philos went on, in driving, almost angry tone, "Down Froure went, and in I plunged, and when Froure dug me out—Froure with a broken foot and four broken ribs, mind you—we found ourselves in here—it's what

the geologists call a chimney. It wasn't quite this tidy. Digging out was past trying. We went *in*."

He pushed past Charlie and seemed to crouch down in black shadows in the corner; then he was gone. Charlie followed, and found the black spot was a hole, a tunnel-mouth. In the dark, Philos took his hand. Charlie stumbled on the hem of the cloak and cursed. "It's too hot."

"Keep it on," Philos ordered flatly.

He moved forward purposively, all but dragging Charlie, who sidled and shuffled and did his best to keep up; and all the while Philos talked, short, sharp, hurried; what he said obviously hurt him to say. "First thing I remember we were in a sort of blind cave back in here. Froure had managed some sort of light, and I felt I was turning inside out. The babies were lost then, my two. It took about three hours. The light held out, I'm . . . sorry to say. Watch your head, it's low here, . . . about six and a half months along. Good well-formed youngsters.

"Your kind of youngsters," Philos' voice came out of the dark after a long shuffling pause. "Homo sap. youngsters."

"What?"

Philos stopped in the dark and there was a scrabbling. Again from a pile of loose rubble he drew a glowing block of material and set it up. They were in a smooth-walled cave which had at one time doubtless been a pressure-bubble in the magma of a volcano. "Right here, it was," Philos nodded. "Froure tried to hide them from me. I get . . . upset when people try to hide things from me.

"We explored a bit. The whole hillside was honeycombed with these chimneys. It no longer is, by the way. We found a way back, a hole a hundred feet away from the rock-fall. But, we found a way through, too—right through the hill, and it comes out past the 'sky.'

"I was hurt and grieved and more than a little angry. Froure too. We had a crazy idea. Froure's foot and ribs were only painful, not dangerous, and we Ledom can handle pain pretty well. But I had internal injuries and something had to be done about it. So we agreed that I should go back, and Froure would just—disappear for a while."

"Why?"

"I had to find out. I'd lost two babies, and they were homo sap. Was it just me? Well, there was a way to find out. And

if I found out what I was afraid of finding out, I wanted Froure and me away from Ledom—far enough, at least to be able to think it through . . .

“So I’d go back. Froure would stay. I’d get treatment, and hurry back as quickly as I could. Well . . . I crawled up the other chimney and we made another rock-fall, and the searchers found me all right, and they naturally dug where I told them, and naturally Froure was not found. But we made that second rock-fall a little too good. I was hurt again . . . it was longer, much longer, than I thought it would be when at last I was on my feet again. I hurried back here—they were oh, so understanding, and left me to grieve any way I wanted to—I hurried back, hoping against hope that I would be in time, and I was not in time. Froure, all alone, bore two babies, and one died.

“They were homo sap.”

“Philos !”

“Yes, homo sap. So we began to be sure. Somehow a baby had to be born in the Medical One to be born a Ledom. Does that sound like anything you ever heard about a mutation ?”

“It sure doesn’t.”

“There is no mutation, Charlie, and that’s what Mielwis wanted you to know. And Froure is alive and here, and so is my homo sap. child, and that’s what *I* wanted you to know.”

It was too much—much too much—for Charlie Johns to grasp all at once. He began to take it in little bites.

“Mielwis doesn’t know this happened to you.”

“Right.”

“Your . . . Froure is here, alive ?” (But Nasive said the rock-fall had been years ago !) “How long, Philos ?”

“Years. Soutin—the child—he’s almost as big as you are.”

“But . . . why ? Why ? Cutting yourselves off from everyone—”

“Charlie, as soon as I could, I began finding out all I could about Ledom—things I’d never thought to ask before. The Ledom are an open and honest people—you know that—but they’re human and they need privacy. Maybe that’s the way they get it—they answer questions but they do not always volunteer. There are secrets in the Medical One and the Science One—not secrets in the sense of your ridiculous ‘classified’ and ‘restricted’ and ‘top secret’ nonsense. But

things, many things, that ordinarily it would never occur to anyone to ask about.

"No one ever thought to question total anesthesia for our monthly physical, for example, and we have that all our lives ; no one wondered why our babies were 'incubated' for a month before we ever saw them ; who would think to ask about such a thing as experimentation in time travel ? Why, it was almost an accident I stumbled across the Control Natural—as it was, I never saw him—and I'd have passed by the hint if it hadn't been for Soutin's birth."

"What's the Control Natural ?"

"A child hidden away in the Medical One. A homo sap. with his mind kept asleep ; something they can check their work against. So you see our three that died, and Soutin, weren't the only homo saps. born here. It was when I found out about the Control Natural that we decided Soutin would stay hidden here—which of course meant Froure stayed too. When Soutin was born, he was a funny-looking little tyke—you'll forgive me, Charlie, but to us he was funny-looking—but we loved him. Everything that happened made us cherish him the more. Mielwis is never going to get Soutin."

"But . . . what's going to happen ? What are you going to do ?"

"That's up to you, Charlie."

"Me !"

"Will you take him back with you, Charlie ?"

Charlie Johns peered through the dim silver light at the cloaked figure, the mobile, sensitive face. He thought about the doggedness, the pain, the care ; the aching loneliness between two of these loving people forced to be so often apart, and all for the love they bore for their child. And he thought of the child—here a hermit-person, buried like a mole ; in Ledom a freak or a laboratory animal ; and back in his time—what ? Without knowing the language, the customs . . . it could be worse than anything Mielwis could do.

He almost shook his head, but he couldn't, with the tearing anxiety showing on Philos face. Besides—Seace wouldn't allow it ; Mielwis wouldn't allow it. (But remember—remember ? He knew the settings for the machine, remember ?)

"Philos . . . could you get us to the time machine in the Science One without anyone knowing ?"

"I could if I needed to."

" You need to. I ll take him."

What Philos said was nothing special. The way he said it was one of the richest rewards Charlie Johns had ever known. With his dark eyes shining, Philos merely whispered, " Let's go tell Froure and Soutin."

Philos wrapped up snugly in the thick cloak, signalling Charlie to do the same, and then placed his hands flat on the far wall, one above the other. His fingers sank into hidden purchases, and pulled outward. A section of the smooth rock, tall as a man, rotated into the chamber. It was hollow, and shaped in cross-section like a wedge of pie. From its triangular dark interior came a gout of frosty air.

" A kind of airlock," said Philos. " The ' sky ' ends back there ; actually, we're outside of it now. I can't just keep an open tunnel or the constant air loss would make someone curious at the pressure station."

It was Charlie's first recognition that the warm, fresh air all over Ledom was not only conditioned, but pressurized as well.

" Is it winter now ?"

" No, but it's almighty high up. . . . I'll go first and wait to guide you." He stepped into the wedge-shaped chamber and pressed against the inner wall. It rotated him out of sight, then swung back inside, empty.

Charlie stepped in and pushed. Before him, the door-edge swung against solid rock ; behind, it clipped at his heels as he pushed. And then he was standing on a hillside, under stars ; he gasped from the thin sharp cold, but perhaps the gasp was more for the stars.

In the starlight, which was quite bright enough, they sprinted down the slope, dropped panting into a deep cleft in the rock, and in it, Philos found a door. He pushed it inward ; warm wind blew on them. They stepped inside, and the wind blew the door shut. They went forward again, and opened a second door, and there, running toward them down a long low room, with a real wood fire cracking on a real stone hearth ; running toward them gladly came Froure, limping but running, and running freely and gladly, Soutin.

Charlie Johns murmured a single word and pitched forward in a dead faint ; and the word he said was " Laura."



"Sometimes when you look around you it scares you," says Herb.

Jeanette is dipping popcorn in puddles of egg colour in a muffin tin, so Davy can make himself an Indian necklace. Davy is only five but he is very good with a needle and thread.

"So don't look around. What are you looking at?"

"The radio, listen to that." A voice is wailing in song. The discerning ear, if forced to listen (if not forced, the discerning ear would not listen) might recognize the theme as *Vesti la Giubba*; the lyric has to do with disappointment at the junior prom, and both lyric and theme are occluded by a piano playing octaves in the high treble: *Klingklingsling-Klingklingsling*, six quarter-notes to the measure. "Who's that singing?"

"I don't know," says Jeanette with a certain degree of annoyance. "I can't be bothered with all this Somebody Brothers and Miltown Trios. They all sound alike."

"Yeah, but who, who's that?"

She poises popcorn over the purple and stops to listen. "It's that wall-eyed one night before last on television with the crooked teeth," she guesses.

"No!" he says triumphantly. "That was that backstreet Fauntleroy they call Debsie. Namely a boy type. *This* is a woman, girl type."

"You don't say." She listens while the voice glisses up the entire four-and-a-half-tone compass of its range and disappears behind the tyre-chain-style piano-playing. "You know you're right."

"I know I'm right, and it scares you." Herb slaps the magazine he has been reading. "I'm reading in here where Al Capp, you know, the cartoon Al Capp says about magazine illustrating, at long last you can tell again in a magazine illustration which is the man and which is the woman. The prettiest one is the man. So just while I'm reading that along comes the radio and there's a girl singer with that special growl that makes her sound like a boy singer sounding like a girl."

"And that scares you?"

"Well things could get confusing," he says jocosely. "Goes on like this much longer, there's going to be a mutation, that like breeds true and you don't know is a boy or a girl."

"Silly. You don't make mutations that way."

"I know it. All I mean is, things go on this way, when the double-sex type mutation arrives, nobody'll notice it."

"Oh, you're making too much of it, Herb."

"Sure. But all the same and seriously, don't you have the feeling sometimes that there's some great force at work trying to make women into men and verse viceroy? Not only this singer bit. Look at Soviet Russia. Never on Earth has a great social experiment turned so many women into so huge a herd of pit ponies. Look at Red China, where at last the little China dolls have been liberated out of the slavery of the honky-tonks and get to wear overalls and shovel coal fourteen hours a day alongside their brothers. It's just the other side of that record we just heard."

Jeanette dips the purple and drips it. "Oh no," she says, "on the other side is *Stardust*."



"You said 'Laura,' and—"

Charlie looked up at the beamed ceiling. "I'm sorry," he said faintly. "Maybe I've been too long without sleep. I'm sorry."

"What is a Laura?"

Charlie sat up, Philos assisting. He looked at the speaker, a brown-haired, grey-eyed Ledom with strong but fine-drawn features, and those rare, firm, sculptured lips which yet can smile readily. "Laura was the one I loved," he said, simply as a Ledom might say it. "You must be Froure." And then he looked again, looked again at the other.

Shy, yet standing beside, not behind the pillar which held the beam which held the rock ceiling. Cloaked, high-collared in the Ledom manner, with biostatic material drawn like his own, snug over the breast. But then cut down and back, leaving the lower body bare but for the sporran-like silk. A face . . . a *nice* face, neither boyish nor too beautiful; and oh, it was not Laura; it's just that she had Laura's hair.

She.

"Soutin," said Philos.

"Y-y-you kept saying *he*!" cried Charlie stupidly.

"About Soutin? Yes, of course—what else?"

And it came to Charlie, yes of course—what else! For Philos had told his story in the Ledom tongue, and he had always used the Ledom pronoun which is not masculine nor feminine but which also is not "it"; it was he, Charlie himself who had translated it "he."

He said to the girl, "You have hair just like Laura's."

She said, shyly, "I'm glad you came."

They wouldn't let him sleep—they couldn't ; they had not the time—but they rested and fed him ; Philos and Froure toured the house, half underground, half on the rim of a high mesa, inescapable to any wingless thing, with broad acres of woodland behind, and meadowland where, they told him, Soutin had shot deer with a bow and arrow. Philos and Froure toured the house openly, they wept, they were prepared never to see it again.

It was late as this that Charlie found himself wondering what would become of them after he had taken Soutin away. What was the thing they were doing—treason ? What was the penalty for treason ? He could not ask. The language had no word for concepts like punishment.

They left the house, climbed the hill, entered the airlock. Inside, they buried the block of light. Through the tunnel into the chimney-top, and there they buried the other block. They discarded their cloaks there and hid them, and came out into the green land, under the steely sky of Ledom. Slowly they walked toward the Ones, two by two like lovers, for Philos and Froure were lovers and Charlie and Soutin must walk so, for she was terrified.

Nearing the Medical One, Froure dropped back and walked with Soutin and Charlie, while Philos walked ahead. Some few might remember Froure, but not seeing him alone. But if Philos, the solitary one, were seen walking like a lover—

And all the way, holding Soutin, whispering warnings and encouragements and sometimes direct orders ; all the way, the thoughts curled and burned in the back of Charlie's mind.

"Don't scream," he said to Soutin sternly as they approached the subway ; he wished he had had someone to say that to him when he first saw it. Stepping into the dark entrance, he turned and caught her tight in his arms, forced her face into the cup of his shoulder. She was lithe as a lioness but as they dropped, rigid with terror. Scream ! Why—she couldn't breathe !

And on the subway she simply held him ; bruised him with her hard slim fingers, as she stood with eyes and lips sealed. But at the other end, when the invisible lift whisked her up, and she had her first experience of the motion that had so thoroughly de-stomached him—she laughed !

. . . And he was glad of her, parting him now and now again from the thoughts

—of love one another

—of man with grafted uterus coupling with man with grafted uterus

—of the knowing pride of children, worshipped

—of the hand of Grocid, and of Nasive, in burnished wood

—of the knives and needles stitching a man-made and inhuman newness into the bodies of babes

—and oh the distance between, or the fusion of, deity and a dirty joke.

They flung up the side of the tilting structure, Charlie smothering Soutin's wild laughter in his shoulder, and walked into the bright shuttered silence of Seace's laboratory. *He won't be there*, Charlie told himself urgently.

But he was there. He turned from some equipment at the end of the room and strode toward them, unsmiling.

Charlie sidled, drawing Soutin with him, making it necessary for Seace to pass him in order to speak to Philos.

Seace said, "Philos, it is not your time to be here."

Philos, pale, opened his mouth to speak, when "*Seace !*" cried Froure sharply.

Seace had not seen Froure, or had not looked at the long "dead" Ledom. He turned to brush away the interruption, and then his gaze snapped, clamped, clung to Froure's fine-drawn features. Froure smiled and touched his hands together, and the mirror-field sprang out ; it was fiendish, it was exquisite in timing, for the scientist, given one clear glimpse of that unmistakable face, impossibly here and living, saw it replaced with his own image. At the very moment he was doubting his eyes, his eyes were denied him.

"Take it down," he said hoarsely. "Froure : is it Froure ?" He came breathing up to the intangible plane of the mirror ; Philos slipped beside Froure and took the ring ; Froure slipped aside and Philos played Seace up the room like a hypnotized bird, then snapped it off and stood smiling. "*Seace !*" called Froure from behind him. . . .

And all the while Charlie Johns was working, working at the control dials of the time machine. He set them, one, two, three four, thumbed the toggle, turned and flung Soutin through the open door of the machine, dove after her, hooking the door to

in midair as he dove. The last thing he saw as the door swung was Seace, aware at last, flinging Froure roughly aside, leaping for the controls.

Charlie and Soutin fell together in a tangle. For a moment they stayed just as they were, and then Charlie got to his feet, knelt by the trembling girl, and put his arms around her.

"I wanted to say goodbye to them," she whispered.

"It's going to be all right," he soothed. He stroked her hair. Suddenly—perhaps it was reaction—he laughed. "Look at us !"

She did : at him, at herself, and turned frightened attentive eyes to him. He said, "I was thinking what it will be like, on the stairs, when we arrive ; me in the Superman outfit, you . . ."

She pulled at her high-collared, swept-back garment. "I won't know what to do. I'm so . . ." She moved the silk of her "sporrán." "This," she said, her voice cracking with the desperate courage of confessional, "it isn't real ; I couldn't ever grow . . . Do you suppose they'll know, where we're going?"

He stopped laughing instantly. "They'll never know," he assured her soberly.

"I'm so frightened," she said.

"You never need to be frightened again," he told her. Nor I, he thought. Philos wouldn't have sent her back to the time when humanity lit the fuse. Or . . . would he ? Would he think it worth while to give her a year among her own kind, a month, even if she must die with them ?

He wished he could ask Philos.

She said, "How long will it take?"

He glanced at the hairline crack which was the door. "I don't know. Seace said, instantaneous . . . from the Ledom end. I suppose," he said, "the door wouldn't open while the machine is . . ." he was going to say "moving" and then "travelling" and then "operating" and they all seemed wrong. "I guess if the door is unlocked, we'll have arrived."

"Are you going to try it?"

"Sure," he said. He didn't go near it, or look at it.

"Don't be frightened," he said.

Charlie Johns turned and opened the door.



"God bless Mommy and Daddy and Grandma Sal and Grandma Felix and I guess Davy too," sings Karen to her own tune. "And—"

"Go on, dear. Was there someone else?"

"Mmm. And God bless God, ay-men."

"Well, that's very sweet, dear. But why?"

Karen says through the translucent margins of slumber, "I just always God-bless everybody that loves me, that's why."



Charlie Johns opened the door into a blaze of light, a blaze of silver light, a silver blaze of overcast, a stretch of silver from here clear to the Medical One, point-down and tipped and filling the view.

"You forgot something," said a voice. Mielwis.

Behind Charlie, a stricken sound. Not turning, "Stay where you are !" he rapped. Instantly Soutin pushed past him, ran out of the machine, by the controls, by Mielwis, by Grocid, by Nasive, by Seace, all of whom stared at her while she flung herself down beside Philos and Froure, who lay side by side on the floor, their hands flat and neat on their abdomens, their feet too limp.

For a moment nothing was heard but Soutin's hard inhalations ; the sighs between were silent.

"If you've killed them," Charlie said at last, in a voice full of hate, "you've killed their child too."

There was no comment, unless Nasive's dropped gaze was a comment. Mielwis said softly, "Well?" Charlie knew he was referring to his earlier remark.

"I forgot nothing. I appointed Philos to report to you. As far as I made any promises at all, I kept them that way."

"Philos is unable to report."

"That's your doing. What about your end of the deal?"

"We keep our promises."

"Let's get to it."

"We want your reactions to Ledom first."

What can I lose now? he thought forlornly, but there was no softening in him. He slitted his eyes and said carefully, "You're the rottenest pack of perverts that ever had the good sense to hide in a hole."

A sort of rustle went through them—movement, not sound. Finally, "What changed you, Charlie Johns? You thought very well of us a few hours ago. What changed you?"

"Only the truth."

"What truth?"

"That there is no mountain."

"Our doing it ourselves makes that much difference? Why is what we have done worse to you than a genetic accident?"

"Just because you do it." Charlie heaved a deep breath, and almost spat as he said, "Philos told me how old a people you are. Why is what you do evil? Men marrying men. Incest, perversion, there isn't anything rotten you don't do."

"Do you think," said Mielwis courteously, "that your attitude is unusual, or would be if the bulk of mankind had your information?"

"About a hundred and two per cent unanimous," Charlie growled.

"Yet a mutation would have made us innocent."

"A mutation would have been natural. Can you say that about yourself?"

"Yes! Can you? Can homo sap? Are there degrees of 'nature'? What is it about a gene-changing random cosmic particle that is more natural than the force of the human mind?"

"The cosmic ray obeys the laws of nature. You're abrogating them."

"It was homo sap. who abrogated the law of the survival of the fittest," said Mielwis soberly. "Tell me, Charlie Johns: what would homo sap. do if we shared the world with them and they knew our secrets?"

"We'd exterminate you down to the last queer kid," said Charlie coldly, "and stick that one in a side-show. That's all I have to say. Get me out of here."

Mielwis sighed. Nasive said suddenly, "All right, Mielwis. You were right."

"Nasive has held all along that we should share ourselves and the A-field and the cerebrostyle with homo sap. I feel you would try to do as you just said—and that you'd turn the field into a weapon and the 'style into a device for the enslavement of minds."

"We probably would, to wipe off the earth. Now crank up your time machine."

"There isn't any time machine."

Literally, Charlie's knees buckled. He turned and looked at the great silver sphere.

"You said it was a time machine. We didn't. You told Philos it was—he believed you."

"Seace—"

"Seace arranged some scenery. A watch with backwards numerals. A book of matches. But it was you—you who believed what you wanted to believe. You do that, you homo sap. You let anyone help you, if he helps you believe what you want to believe."

"You said you'd send me back!"

"I said we'd return you to your previous state, and we will."

"You . . . used me!"

Mielwis nodded, almost cheerfully.

"Get me out of this," snarled Charlie. "Whatever you're gibbering about." He pointed to the grieving girl. "I want Soutin as well. You've got along fine without Soutin so far."

"I think that would be fair," said Grocid.

"How soon do you want to—"

"Now! Now! Now!"

"Very well." Mielwis held up a hand; somehow it made everyone stop breathing. Mielwis spoke a two-syllable word: "Quesbu."

Charlie Johns shuddered from head to foot, and slowly put up his hands and covered his eyes.

After a time, Mielwis said softly, "Who are you?"

Charlie put down his hands. "Quesbu."

"Don't be alarmed, Quesbu. You're yourself again. Don't be afraid any more."

Grocid, awed, breathed, "I didn't think it could be done."

Seace said rapidly, softly, "His own name—a post-hypnotic command. He's really—but Mielwis will explain."

Mielwis spoke: "Quesbu: do you still remember the thoughts of Charlie Johns?"

The man who had been Charlie Johns said dazedly, "Like . . . a sort of dream or . . . or a story someone told."

"Come here, Quesbu."

Trusting, childlike, Quesbu came. Mielwis took his hand, and against the young man's biceps he pressed a white sphere, which collapsed. Without a sound Quesbu collapsed. Mielwis caught him deftly and carried him over to the side, where Philos and Froure lay. He put Quesbu down beside them and looked into the frightened, lost eyes of Soutin.

"It's all right, little one," Mielwis whispered. "They're only resting. Soon you'll be together again." He moved slowly, so as not to startle her, but with great sureness, and touched her with another of the little spheres.



Jeanette tells Herb about Karen : she says God bless God, because she God-blesses everybody who loves her.

"So does God," says Herb flippantly ; and as the words hang there it is not flippant any more.

"I love you," says Jeanette.



. . . And at last the heads of Ledom may confer quietly among themselves.

"But there really was a Charlie Johns ?" asked Nasive.

"Oh yes indeed there was."

"It's . . . not a happy thing," said Nasive. "When I took the position that we should share what we have with homo sap., it was a . . . sort of unreal argument. There wasn't anything real involved, somehow ; just names of things." He sighed. "I liked him. He seemed to—to understand things, like our statue, *The Maker*, yes, and the feast . . ."

"He understood all right," said Seace with a touch of sarcasm. "I'd like to have seen how much he understood if we'd told him the truth about ourselves before he saw the statue and the feast, instead of afterward."

"Who was he, Mielwis ?"

Mielwis exchanged a look with Seace, shrugged slightly, and answered, "I might as well tell you. He was in a homo sap. flying machine that crashed in the mountains near here. It came apart in the air. Most of it burned and fell on the other side, far away. But that one part landed right on our 'sky' and perched there. Charlie Johns was inside, very badly hurt, and another homo sap. who was already dead. Now, you know the 'sky' looks just like mountains from above, but all the same it wouldn't be too good an idea to have search parties climbing around on it.

"Seace saw the wreckage up there in his instruments, and immediately put up an A-field carrier and snatched it down.

I did my very best to save his life, but he was too badly hurt. He never regained consciousness. But I did manage to get a complete cerebrostyle record of his mind."

Seace said, "It's the most complete record we ever got of a mind."

"Then it came to us, Seace and me, that we could use the record to find out what homo sap. would think of us if he knew about us. All we had to do was to suppress the id, the 'me' part of someone by deep hypnosis, and replace it with Charlie Johns' cerebrostyle record. Having Quesbu, it was a simple matter."

Groid wagged his head in amazement. "We didn't even know about Quesbu."

"The Control Natural. No, you wouldn't. A research property of the Medical One. There has never been any reason to tell anyone about Quesbu. He's been well-treated—happy, even, I think, though he's never known anything but his own compound in the Medical One."

"He has now," said Nasive.

Groid asked, "What's to become of them—Quesbu and the other?"

Mielwis smiled. "If it hadn't been for this incredible Philos and his hiding Froure and the child all these years—and hide them he did; I never in the world suspected a thing about it—I'd be hard put to it to answer that. Quesbu could hardly be confined again, after his stretch as Charlie Johns, even if he regards it as a dream. For a lot of his experience wasn't dream at all—he did, after all, personally and truly visit all the Ones. Yet he's too old now to be turned into a Ledom, except in a partial way; I wouldn't commit such a thing upon him.

"But the child Soutin gives us a new opportunity. Can you imagine what it might be?"

Groid and Nasive shared a glance. "We could build them a house?"

Mielwis shook his head. "Not in the Children's One," he said positively. "They're too . . . different. Any amount of care, of love, even, couldn't make up for it. It would be asking too much of them, and perhaps too much of us. Never forget who we are, Groid—what we are, what we're for. Humanity has never attained its optimum ability to reason, its maximum objectivity, until now, because it has always plagued itself with its dichotomies. In us, the very concept of any but

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individual differences has been eliminated. And Quesbu and Soutin are not different in an individual sense ; they are a different *kind*. We Ledom could probably cope with it better than they, but we are still new, young, unpracticed ; we are only in our fourth generation . . .”

“ Really ?” said Nasive. “ I thought . . . I mean, I *didn't* think. I didn't know.”

“ Few of us know ; few of us care, because it doesn't matter. We are conditioned to look ahead, not back. But because it bears on our decision of what to do with Quesbu and Soutin, I'll tell you briefly how the Ledom came to be.

“ It has to be brief ; for we know so little . . .

“ There was a homo sap., a very great one ; whether he was known as such among his kind, I do not know. It seems probable that he was. I think he was a physiologist or a surgeon ; he must have been both and a great deal more. He was sickened by mankind, not so much for the evils it committed, but because of the good in itself it was destroying. It came to him that humankind, having for some thousands of years enslaved itself, was inescapably about to destroy itself, unless a society could be established which would be above all the partisanship which had divided it, and unless this society could be imbued with a loyalty to nothing but humanity.

“ He may have worked alone for a long time ; I know that at the end, he was joined by a number of like-thinking people. His name, their names are not known ; humanity honours by emulating, and he wished us to copy nothing from homo sap. that could be avoided.

“ He and his friends made us, designed our way of life ; gave us our religion and the cerebrostyle and the rudiments of the A-field, and helped the first generation to maturity.”

Nasive said suddenly, “ Then some of us must have known them !”

Mielwis shrugged. “ I suppose so. But what did they know? They dressed, acted, spoke like Ledom ; one by one they died or disappeared. As an infant, a child, you accept what you see around you. We four are teachers—right ? So were they.

“ And all they ever asked of us was that we keep humanity alive. Not their art, music, literature, architecture. *Themselves* ; in the widest sense, the self of humanity.

“ We are not really a species. We are a biological ‘construct.’ In a cold-blooded way we might be called a kind of machine

with a function. The function is to keep humanity alive while it is murdered, and after it is well dead—

“*To give it back !*”

“That is one aspect of Ledom which we never told Charlie Johns, because he would never believe it. No homo sap. would or could. Virtually never in human history has a group in power had the wisdom to abdicate, to relinquish, except under pressure.

“*The other is that, although we are still using the surgical-medical techniques, we have found out how to induce the mutation and breed it true. So our sacrifice is even greater ! It is an article of faith with us to be transient.*”

“We are to be as we are, stay as we are, keeping the skills of the soil, holding open the two great roads to the inner self—religion, and love—and studying humanity as humanity has never troubled to study before—from the outside in. And from time to time we must meet with homo sap. to see if he is yet ready to live, to love, and to worship without the crutch of implanted bi-sexuality. When he is—and he will be if it takes us ten thousand, or fifty thousand years, we the Ledom will simply cease. We are not a Utopia. A Utopia is something finished, completed. We are transients ; custodians ; a bridge, if you like.

“The pure accident of Charlie Johns’ arrival here gave us an opportunity to find out how homo sap. would react to the idea of the Ledom. You saw what happened. But the factor of Soutin, now : that presents us with a new opportunity, and our very first to see if homo sap. can be made ready for its own maturity.”

“Mielwis ! You mean to set them out to start a new—”

“Not a new homo sap. The old one, with a chance to live without hate. To live like all young things, with a hand to guide them.”

Groid and Nasive smiled at one another. “Our specialty.”

Mielwis smiled back, but shook his head. “Philos’, I think, and Froure’s. Let them be together—they’ve earned it. Let them live at the edge of Ledom—they’re used to it. And let the young humans know only them, and remember us ; and then let their children and their children’s children remember them and make of us a myth . . .

“And let us always watch them, perhaps help them by accidents and bits of luck ; if they don’t succeed they will fail and if they fail they will die, as humanity has died before . . .

"And one day, some other way, we will start humanity again, or perhaps meet humanity again . . . but somehow, some day (when we know ourselves well) we can be sure, and then Ledom will cease, and humanity will begin at last."

On a starry night Philos and Froure sat outside for a few minutes in the thin cold air. Quesbu and Soutin had left an hour before, after a real family dinner, and had gone back to their snug log-and-sod house out on the wooded mesa.

"Froure . . .?"

"What is it?"

"The youngsters . . ."

"I know," said Froure. "It's hard to put your finger on it . . . but there's something wrong."

"Not a big something . . . maybe it's just pregnancy."

"Maybe . . ."

From the star-silvered dark: "Philos . . .?"

"Quesbu! What on earth . . . did you forget something?"

He came out of the shadows, walking slowly, his head down. "I wanted to . . . Philos?"

"Yes, child; I'm here."

"Philos, Sou is . . . well, she's unhappy."

"Whatever's wrong?"

"I . . ." Suddenly he flung his head up, and in the dim glow of his face, stars stood: tears. "Sou's so wonderful but . . . but all the time I love somebody called Laura and I can't help it!" he burst out.

Philos put an arm around his shoulders and laughed; but laughed so softly, with such compassion, that it was a stroking. "Ah, that's not your Laura, that's Charlie's!" he crooned. "Charlie's dead now, Ques."

Froure said, "Remember the loving, Quesbu; but yes—forget Laura."

Quesbu said, "But he loved her so much. . . ."

"Froure's right," said Philos. "He loved her. Use the love. It's bigger than Charlie—it's still alive. Take it back and give it to Sou."

Suddenly—Philos thought it was a glory in his face, but it was the sky—suddenly the sky blazed; the stars were gone. Froure cried out. And their familiar mesa was unfamiliar in the silver overcast of a Ledom sky.

"So it comes ; at last it comes," said Philos. He felt very sad. "I wonder when Seace will be able to take it down again . . . Ques, run back to Soutin—quick ! Tell her it's all right ; the silver sky is keeping us safe."

Quesbu sprinted away. Froure called, "Tell her you love her !"

Quesbu turned without breaking stride, waved just like Charlie Johns, and was gone through the woods.

Froure sighed, and laughed a little, too.

Philos said, "I don't think I'll tell him . . . the love's too good to spoil . . . poor Charlie. His Laura married someone else, you know."

"I didn't know !"

"Yes—you know perfectly well you can cut off a cerebro-style recording at any point. Seace and Mielwis just naturally cut off Charlie's record at a point where he was full of love ; he might understand Ledom a bit better. But actually Charlie had a bit more memory than that."

"He was in that flying thing because he wanted to get away from—"

"'Fraid not. He just got tired of her, which is why she married someone else. But that I wouldn't tell Quesbu."

"Oh, please don't," said Froure.

"At loving . . . amateurs," chuckled Philos. "Actually, Charlie was in that plane being flown to a place on the coast not too far from here. They had some bad earthquakes down there that year, and he was a bulldozer operator, you know. *oh !*" he cried, looking up.

The sky began to shimmer, then to sparkle.

"Oh, pretty !" cried Froure.

"Fallout," said Philos. "They're at it again, the idiots." They began to wait.

POSTSCRIPT

It was my aim in writing *Venus Plus X* a) to write a decent book b) about sex. It is impossible to attempt such a thing without touching upon religion, which is impossible to do without touching rather heavily upon some of your toes. If this hurts, I am sorry about the pain. My own toes stand firmly upon two planks in the Bill of Rights, and if you have a

book which refutes me, I promise that I shall read it with full attention and that *I will not burn it*.

Finally, I'd like your help in staking these books spread all over my desk, partly because some of them are heavy and partly because it really might interest you to know whereout some of the *Venus Plus X* material was dredged. (Almost.) Needless to say, I make no claim to having transferred the contents of any of these books *in toto* into my manuscript. But they are, one and all, provocative tomes, and I list them for provocation's sweet sake ; and where due and acceptable, to extend my thanks to the authors.

Holy Bible : Oxford Concordance. *The Human Body and How It Works*, by Elbert Tokay, Ph. D., Signet (NAL). *The Transients*, four parts, by Wm. H. Whyte Jr., *Fortune* magazine, 1953. *The Varieties of Religious Experience* by William James, Modern Library (Random). Cunningham's *Manual of Practical Anatomy*, Oxford Medical Pubs., 1937. *Patterns of Culture*, Ruth Benedict, Mentor, 1953. *The Disappearance*, especially Chapter 13, p. 262, by Philip Wylie, Pocket Books edition, 1958. *Psychoanalysis and Religion* by Erich Fromm, Yale University Press, 1950. Various recent magazine articles by Margaret Mead. *Sex in History*, by G. Rattray Taylor, Ballantine, 1960, and *Are Clothes Modern?* by Bernard Rudofsky, Theobald, 1947. (These last two are among the most startling, informative, and thought-provoking books you could pick up.) Most of the Ledom names came from an article by John R. Pierce (J. J. Coupling), "Science for Art's Sake," in *Astounding Science Fiction* for November 1950 in listings of "words" constructed by the use of a table of probabilities and a table of random numbers. "Ledom" itself comes from a can of my favourite tobacco spelled backwards. All original trade names and advertising slogans herein copy-righted herewith.

Theodore Sturgeon.



By viewing any art form as pyramidal in structure, one may consider its excellences as improving from its base to the apex. The 1% (the "best") at the pinnacle is positioned by a complex of informed criticism, contemporary mores, current standards of execution, and approval by an articulate minority; and should be the standard of judgment or comparison for any individual work in that art form, although its actual position may slide around to various levels in the pyramid below that apex according to the bias or ability of the critic currently sitting in judgment. The point I am trying to make is that science-fiction, which is (to quote Damon Knight expressing Sturgeon's rule) "all except a tithe of it crud ; yet what are we all but God's sparrows ?" has, in common with other art forms an axiomatic 99% supporting mass, which makes for easy generalisations.

All creatives artists whether film makers, poets, painters or s-f writers had their beginnings at some level of the pyramid, and even those geniuses achieving the top 1% at first exposure must surely have had their earlier private failures, and most fail to rise above mediocrity. The cynic will retort that in s-f those failures also get published, but I feel that in the past s-f has suffered somewhat unfairly from over generalisation of the whole pyramid in its presentation to the public view by inquiring but not too well-informed commentators. Detractors of the s-f magazines, for example, which have always been vulnerable to attack by the peculiar circumstance of their make-up and presentation (particularly in America) tend to overlook the fact that the s-f anthologies which are usually and justly admired by the same critics are mainly culled from the pages of the maligned magazines, and many of the novels published in book form are revised versions of magazine serials.

From the point of view, then, of an s-f addict (you, dear reader ? and I) the prospect of **New Maps Of Hell** as surveyed

by Kingsley Amis (Gollancz, 16/-) is fraught with some anxiety. Almost a household name (at least in homes where Sunday morning tea is taken with the *Observer*), lionised for *Lucky Jim* and other wittily satirical novels of contemporary life, the didactical Mr. Amis is clearly the champion for exorcizing our pseudo-scientific banalities and fantastic fancies. But I am pleased to report that he *is* a champion—on our side.

Not without a certain admonition (which can be well taken for he is a shrewd observer), nor without controversial talking points (for his own bias is clearly revealed) which could, and should, be argued by someone of equal fluency and a greater knowledge of s-f (help !—someone). Having admitted to an addiction to the pre-war pulps at a tender age, and having obviously maintained a nodding acquaintance with contemporary s-f since then (enough apparently to have been able to swot up on a random sample of magazines and books to give a series of lectures on s-f at Princeton University in 1959, the substance of which forms the basis of this book) he performs a useful service in attempting to analyse, for his own amusement and possibly the edification of the uninitiated, the background, current trends, and the prospects of science-fiction.

In doing so, he dismisses aversely all “fantasy” as opposed to his own personally defined “science-fiction” (yet treads uneasily around this indefinable boundary) and reveals a penchant for idealising satire as the prime significance of s-f, whilst his sins of omission are great (inevitable in a thesis of this length, but not entirely forgivable). Most of his quotes do the genre a disservice, but merely emphasise my point about the pyramid—how unwise it is to generalise about particulars taken from any lower level of the pyramid than the apex. The prime object of all fiction writing is to entertain, and it is no less fair to sneer at the less sophisticated among s-f readers who are satisfied with the puritanism and unsubtleties of space-opera (or even “terrestrial space-opera” if you please !) than it is to deny the appreciation of the more perceptive among us for the intelligent ideas, high literary standard, adult presentation of sexuality, sophistication of humour, scientific prediction and plausibility, which does undoubtedly exist in s-f even if only in that 1% at the top.

To his credit, Mr. Amis often enthusiastically entertains this idea, and is never condescending. And unlike several of his reviewers in the national press—perpetrating thudding errors by misquoting from obvious misreading—he makes only one

factual error : in discussing Richard Matheson's *I Am Legend* he terms the vampiric microbe as aerophobic, whereas that cunning germ was either anaerobic or aerobis according to circumstance. Or did Mr. Amis by some means of satirical double-think really mean to say aerophobic? Succinct summing-up—a must to buy, read and keep as it is by far the best thing done for us yet.

Activated no doubt by Mr. Amis' quotable adulation of Frederik Pohl's work, the same publisher has resurrected the fruit of that very last collaboration between Pohl and the late C. M. Kornbluth, **Wolfbane** (Gollancz, 13/6)—serialised several years ago in *Galaxy*, then expanded into a novel-length paper-back in the USA, of which this is the first hard-cover format. It luckily supports Mr. Amis' dictum, beginning as it does with a brilliantly Pohl-conceived social future, here based on a submissive Oriental pattern, governed by a low-calorie diet zen meditation and putitanical sexual code. Humanity's plight is to die after two centuries of alien control but the elements of revolt—the nonconformist Wolves—are gathering, and in the second half of the book, heavily influenced by Kornbluth's flair for action, the fantastic battle for freedom is fought by methods which stretch the imagination to the utmost, yet with enough technical plausibility, occasional irony (such as the human components integrated in the mechanical aliens' servomechanisms) and intelligent ideas for acceptance at any level of modern adult s-f.

Quite different is Frederik Pohl's own **Slave Ship** (Dennis Dobson, 11/6) his first solo novel, with a publishing history identical to that of the previous title, which is rather a damp squib compared with his other work. It is a light-hearted romp with humour both broad and subtle, neatly told in the first person by a rather stuffy (but likeable) rather slow-witted (but true-blue hero type) naval officer (American, in vague future period) deeply involved in undeclared global conflict—Caodais (Eastern menace, religious, out of Vietnam and points East) vs. Western democracies (what's left of 'em). Natty tactics involving animal philology and lots of derring-do end in a slightly boyish-prank finale. Good, but not exceptional.

Having established successfully what I hope will now be a permanent institution with his annual *Best SF* series, the able

and discerning Mr. Edmund Crispin goes from strength to strength, and to describe **Best SF 4** (Faber & Faber, 15/-) as good as, if not better than, its predecessors, is a pleasure that can be increasingly embarrassing for any reviewer, for oft-repeated truths can come to be received with suspicion, much in the same manner as the boy who cried "Wolf!" Mr. Crispin's self-deprecating foreword is amusing and usefully brief and introduces ten very fine stories including J. T. McIntosh' study of space loneliness "The Bliss of Solitude," a quartet of thought-jerkers—"The Short Life" by Francis Donovan, A. J. Deutsch' "A Subway Named Mobius" (clue?) Anthony Boucher's memorable "Balaam," and Rog Phillips' "The Yellow Pill" an ingenious solipsist puzzle which drew Kingsley Amis' attention. For good measure there is Brian Aldiss' "Psychops," Daniel Keyes' moving "Flowers for Algernon," Eric Frank Russell's typically racy "Hobbyist," Evelyn Smith's unusual "*Baxbr*" (I too like composers), and top of the list, the incredibly horrific "It's a *Good Life*" by Jerome Bixby (which not surprisingly frightened Mr. Amis, and I couldn't agree with him more) and which Editor Carnell discerningly picked up and published in *Science Fantasy* as long ago as 1955.

Rounding off this month's review shelf is a "juvenile" **Kemlo and the Space Invaders** by E. C. Elliott (Nelson, 7/6) the umpteenth in this obviously successful series of sub-teen-age s-f (and I'm afraid I couldn't begin to explain why) and a remarkable book called **Beyond The Planet Earth** by Konstantin Tsiolkovsky (Pergamon Press, 15/-) a barely-disguised fictional account of man's first journey by rocket into outer space. Written in 1920 by the alleged "father of the Sputniks" it's scientific content probably does substantiate to a certain degree the Russian claim for Tsiolkovsky's astronautic pioneering, but I should like to date his fiction style as dehumanised-Verne if that can possibly convey anything to you. Strictly for the completists.

Leslie Flood

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